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THE ELEMENTARY SCHOOL JOURNAL

CONTINUING "THE ELEMENTARY SCHOOL TEACHER"

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EDUCATIONAL NEWS AND EDITORIAL COMMENT

The editor who prepares these notes is always willing to retract anything that he has said which misrepresents anyone. He gladly gives first place this month to a communication dated December 3, 1917, as follows:

To the Editor of the "Elementary School Journal":

Professor Meriam's Letter

In your issue for September, 1917, you quote from a news item that appeared relating to one of a series of lectures which I gave at the University of Pittsburgh. To report only a part of the truth may be as misleading as to report erroneously. Readers of the *Elementary School Journal* should not be misled as to an educational experiment attracting much attention. The editorial writer in the Pittsburgh paper, who heard my lecture, rightly reported my position in part: "Textbooks are a great nuisance and a very great waste of money." But he seems to have been so engrossed in taking notes on this idea, so new to him, that he wholly lost the facts I presented in the next ten minutes, showing the great use made of books in the Elementary School at the University of Missouri.

In brief, I said this: Textbooks are a great nuisance, since, as they are usually used, they greatly limit the intellectual activity natural to active boys and girls; much money is wasted in any locality in expending, for example, thirty dollars for forty copies of one geography in a fourth grade, and in thus securing for the forty pupils the *contents* of only one book; on the other hand, in place of these duplicate textbooks the Elementary School at the University of Missouri provides a library of about 2,500 volumes for the use of about

one hundred pupils. Few schools, if any at all, use books as extensively as this school.

It appears as if the Pittsburgh journalist had in mind entertaining his readers rather than informing them. My destructive criticism upon textbooks and his ironical comments upon my position might be more "readable" than my constructive criticism upon the use of a much larger library and any comment he might make upon the *whole* truth.

Further, I cannot but be surprised that the *Elementary School Journal*, on the part of its editorial staff, should fall into the same error as the Pittsburgh journalist in accepting his report of only a part of a lecture. It is poor logic to conclude that a textbookless school is a school without books, where the teacher lectures and the pupils do no reading. In the Elementary School at the University of Missouri the teachers study with their pupils and together they read very extensively.

J. L. MERIAM

UNIVERSITY OF MISSOURI

Textbooks and Their Misuse

Having thus performed any editorial penance which may be due, the writer comes back with unregenerate mind to ask whether Mr. Meriam is arguing against textbooks or their misuse. The closing sentence of the September note seems still pertinent: "To be sure, textbooks may be abused, but so may the English language."

The writer is so much in the dark about Mr. Meriam's beliefs on the matter of textbooks that he is moved to restate his own position. Textbooks are the historically accepted devices for guiding instruction in American schools. They are essential to the type of teaching which goes on in these schools. They are not nuisances. To call them such is either to shut one's eyes to the facts or to adopt scare headlines in the effort to attract attention to an argument which has validity only when applied to certain misuses. Even the misuses referred to are probably far less harmful than the confusion created by extravagant and unsustained attacks.

This statement of the writer's credo is at least no misrepresentation. He is quite willing to defend each article of his faith with an argument as long as the patience of any reader.

C. H. J.

The new Federal Board for Vocational Education has been in operation for four months. Its achievements during that time are presented in the following table:

Federal Board for Vocational Education

Acceptance of the vocational education act by 46 of the 48 states.

Approval of plans for vocational educational systems for 22 states, involving an expenditure this year of more than $850,000 of federal money and at least an equal amount of state money.

Regionalizing of the United States for administrative purposes and establishing working relations with state school officials.

Publication of a statement of policies.

Establishment of more than 50 night classes to train radio and buzzer operators for the United States Army, with an enrolment of more than 3,000, and still growing rapidly.

Working out a system of vocational training for the Quartermaster Corps, the Engineer Corps, and the United States Shipping Board.

The following summary of its statement of policies was given out on December 20 and is of interest because it shows the extremely broad definition which is given to the term "vocational education."

The first official federal definition of vocational education under the vocational education act is made public in a bulletin on the policies of the Federal Board for Vocational Education, issued today.

"To the extent that it is subsidized by the federal government under the Smith-Hughes act," declares the board, "vocational training must be vocational training for the common wage-earning employments. It may be given to boys and girls who, having selected a vocation, desire preparation for entering it as trained wage-earners; to boys and girls who, having already taken up a wage-earning employment, seek greater efficiency in that employment; or to wage-earners established in their trade or occupation who wish, through increase in their efficiency and wage-earning capacity, to advance to positions of responsibility."

The guiding principle of the newly created system of vocational education is announced to be that "the education to be furnished must be under public supervision and control designed to train persons for useful employment, whether in agriculture, trade and industry, or home economics."

To meet the demand for information as to the policies of the Federal Board, and edition of 100,000 copies of this bulletin is being published and distributed to members of Congress, federal officials, state and city school officials, manufacturers, chambers of commerce, labor unions, educators, newspapers, magazines, and, in general, to the interested public.

In addition to the statement of policies, the bulletin contains analyses of the law, together with statistical tables showing the amounts of money available to the states for co-operation with the federal government in securing vocational education.

Child Labor Day

Attention was called in an earlier issue to the request of the National Child Labor Committee (105 East Twenty-second Street, New York City) that special attention be given this year to Child Labor Day, which has been set for January 28.

The problems raised by the war call for serious consideration. Professor Leavitt has put the problem very clearly for the Committee in the following statement:

That there is need for extra protection for the potential working child at the present time is shown in many ways. Recent figures from a large eastern city show that there has been a decrease in the elementary-school enrolment of over 3,000 children within a year. The superintendent states that it is due to the unprecedented demand for child labor, and that the demand is still increasing.

The enforcement of present child-labor laws and compulsory school-attendance laws will prevent such a demoralization of the school system as that which occurred in Great Britain, and it is safe to say that the children under sixteen will be well protected in most of the progressive states. But even in these states, and under the most favorable conditions, there is need of protecting those children who leave school unnecessarily to accept low-grade positions in shop and factory simply because the unusually high wage is so alluring.

Boys who, under conditions obtaining three years ago, could not find places where they could earn more than $6, now find it possible, in many communities, to get work at from $2 to $3 a day.

Two dollars and seventy-five cents a day is a high hurdle to put in front of a school door. It raises the question in the minds of the parents, as well as the children, as to whether that which the child receives in the school is actually worth as much. Of course, in general, we believe that it is, but we are not in a good position to show the reason for the faith that is in us. The duty of the school, and of the community too, should be obvious.

First, we should study the situation sufficiently to enable us to prove to the potential working children just what another year or two of education would be worth, and to show them the reason why.

Second, we should give added emphasis to the most practical and effective industrial training in the schools to the end that young people will not only stay in school a little longer, but that such extension of school life will increase

their efficiency and their earning power, thus enabling them to give added service to their country later on as the result of added education now.

Third, we should make the greatest possible effort at this time to provide for all children who go to work, in spite of our efforts to hold them, some measure of educational supervision, through the establishment of part-time classes, day and evening continuation schools, and public schools in employers' plants.

The great danger is not so much that children will begin work as it is that they will cease permanently to follow any kind of systematic education. Our problem at this time is not so much to protect children under fourteen from exploitation and from dangerous employments as it is to protect the potential working children from fourteen to eighteen from selling their birthright, and that unnecessarily, for a mess of pottage.

Superintendent Manning's Problem

Perhaps the problem can be even more vividly stated by a description of a single concrete situation which calls for educational leadership of the highest order in its treatment. Superintendent Manning, of Buhl, Idaho, writes as follows to the editor of the *Journal:*

DEAR SIR:

The war has brought us face to face with new school problems. They demand our immediate attention. The patrons expect us to find a solution and find it quickly.

I am anxious for suggestions.

First, some facts to give you a view of the situation, not alone in Buhl, but in many agricultural communities and others.

Buhl is located in an agricultural section—stock, grains, seeds, fruits, vegetables, hay, irrigated country, intensive farming calling for large numbers of laborers.

School district six miles square, 775 pupils, use 16 wagons for transportation, 55 per cent of the enrolment country boys and girls, 200 in high school, 125 in seventh and eighth grades.

Community has sent 150 of its young men to the colors.

Labor situation very critical. Must use boys and girls. Wages $4 to $7 per day, $75 to $100 per month and board. Children make as high as $4 per day. Spring work begins about April 1, closing about November 1 to 15. Sixty-five per cent of students of upper grades and high school left last spring before close of school on eighteenth of May. Large number of students will be out three or four months. It will be necessary to let more of them go next spring.

Problem: How to give the boys and girls the education and yet make it possible for the farmers to produce the crops.

If your state or parts of it have this problem, please advise me what is being done to meet the situation.

My solution: I have recommended a six-day week from December 1 to April 15 and a five-day week from September 1 to December 1. The schools will close on April 15 under this plan. This will make it possible for us to do our work well and make it possible for nearly all students to do the work. Use of wagons complicates situation, as it is almost necessary to apply six-day plan to all grades. Some object to applying plan because they believe it will be too hard on little folks. By extra expense of $1,000 we could apply plan to grades above sixth and continue old plan for other grades.

What is your opinion on this method? Can you suggest another way out?

Very truly,

C. G. MANNING

Speeding up Schools

The principle which was adopted by Superintendent Manning seems to the present writer to be right. Speed up the schools. Industry is speeded up. Production of material is speeded up. Why not speed up every activity which has to do with human conservation? To lengthened school weeks let us add supervision of the work which young people undertake when they go to work. Our whole national life can be turned into a continuous effort to educate for a more efficient use of the opportunities of democracy. There should be on every hand an unremitting effort to speed up schools and to maintain higher and more exciting standards.

Department of Superintendence

The February meeting of the Department of Superintendence is to be held this year in Atlantic City. It is the duty of western school men to help make the meeting numerically as strong as possible. Never was the need greater than now that wise counsel should lead to unified educational policy and action in American schools.

At the risk of seeming to favor local opportunity this *Journal* urges the department to consider coming to Chicago. The mid-winter meeting has grown so large and significant that dangers of factional political friction are reduced to zero. There is only one consideration which is of real importance. This meeting should be made as easily accessible as possible to the educational administrators of the country. There is only one way to do this.

School Expansion

That there is to be an expansion of American education as a result of the war is freely predicted on all sides. The directions in which this expansion is to take place will begin to appear as one program of reform after another begins to express itself at educational meetings and in the co-operative work of educational committees.

The following report from the *Journal*, of Columbus, Ohio, gives a view of one of the first aggressive campaigns:

A uniform educational system for Ohio cities and villages will be drafted by leading school men of the state and presented to the Ohio State Teachers' Association at a meeting here Christmas week.

School superintendents of larger cities in the state decided to take this action at a conference here yesterday.

Points approved by the committee yesterday are:

An attempt should be made to organize the state for greater vocational training. Districts should be mapped out and children from rural communities who desire to take the training given free transportation.

Provision should be made for better physical training in city and county schools.

More emphatic and general emphasis should be placed on community hygiene.

More emphasis given to civics and American politics and history.

Improvement and stabilizing of local county and city normal schools.

Organization for a strong movement now for increases in the state levy and appropriations for public schools, high and common.

State support for new school plans.

Manhattan Trade School for Girls

Everyone who has been interested in trade training for girls has looked to the Manhattan Trade School as the most conspicuous example of success in solving the problems of such training. A new building is to give external and material expression to the success of this institution. The following description of the new building is copied from the *Brooklyn Eagle:*

The new Manhattan Trade School for Girls, on Lexington Avenue and Twenty-second Street, Manhattan, a beautiful ten-story building, will be opened early in 1918. The school was established years ago by some philanthropic people of the city, and the Board of Education took it over, with all its equipment, its principal, Miss Florence M. Marshall, and her teachers. It has been in a building on East Twenty-third Street, in inadequate quarters.

The new building will accommodate nearly 1,200 girls, and gives an opportunity to introduce other trades if necessary.

The school prepares girls to enter trades and endeavors to place them in good positions, where they can earn good wages and have an opportunity to advance until they become skilled workers. No "dead-end" trade is taught, although there are "seasonal" trades. It offers training in these trades: Dressmaking, millinery, clothing-machine operating, straw-machine operating, embroidery-machine operating, kid-glove operating, sample-mounting, novelty work, lampshade-making, fancy feather making. In connection with these trades the girls are also taught designing and perforating for embroidery, drawing and costume designing, cooking, physical training, business arithmetic and accounts, business English, textiles, industrial conditions, and trade ethics.

The course in any trade may be completed by the average girl in one year, but many girls prefer to remain longer for further practice, and these girls can usually secure better positions and wages because they are more skilful. Girls are admitted on Monday of each week, and may choose the trade they wish to learn. The instruction is individual and girls are promoted as rapidly as their work will permit. The school is in session every month, except August, from nine until five o'clock each day, except Saturday. An hour each day is given for luncheon and recreation.

The new building which the school will occupy was designed especially for it by C. B. J. Snyder, superintendent of school buildings, with the advice of Miss Marshall. When finished and equipped it will be a model of its kind.

In the basement are the boiler-room, coal storage, receiving and shipping office, and a wardrobe, in which can be placed the clothing of a large proportion of the students, with other accommodations.

The first floor is on a level with the street, and has a large salesroom on the corner, with plate-glass windows, and stockroom, for the sale of goods manufactured in the school. A restaurant will be on this floor for about one hundred persons, and will be open to the public. The kitchen and pantry are on rather a large scale, as they will be used for training girls as waitresses, etc., in cafeterias, tearooms, restaurants, etc.

The main entrance to the school is on Twenty-second Street, a double stairway and elevators leading to the second story, on which are the executive offices; also a lecture-room seating about three hundred persons.

The third floor is given over to the elementary sewing rooms, two of the three rooms accommodating each 80 students, and the third 64. It has stockrooms, wardrobes, storage, and other offices.

On the fourth floor are trade classrooms, one accommodating 100 students in children's dressmaking, another for 90 students in lingerie, and the third 80 students for speed tests in hand and machine work. There are a teachers' room, a teachers' restroom, storage, and other conveniences.

Four non-vocational classrooms are on the fifth floor, accommodating 34 and 40 students each, to be used by all the pupils in the school for departmental

work in arithmetic, English, textile industrial conditions, etc., and also a room, subdivided by folding partitions, for 120 students in millinery.

The sixth floor has a room for sample-mounting, novelty, and lampshade-work for 70 students, two for designing for 40 students, a laundry for 10 students, a room for manicuring for 12 students.

The seventh floor is open for 212 students in dressmaking, and has fitting-room, cases, etc. The eighth floor is given over to machine-operating for 164 students, with a cutting-room adjacent.

The lunchroom is on the ninth floor, and has a large serving kitchen, to be used as part of the instruction preliminary to serving in the public restaurant on the first floor. While not in use at noon for lunches, the room will be used by a class in design, the desks of which can be easily moved.

The tenth floor is the gymnasium, with lockers and lecture- and shower-rooms. The roof is to be used for recreation and outdoor gymnastics, and it is to be partly roofed with glass.

Two elevators will run from the basement to the tenth floor, and while the girls will work under factory conditions, these will be the very highest type. This means that the most careful consideration has been given to every part of the building, together with its finish and equipment.

The site is 75 feet on Lexington Avenue and 99.4 feet on Twenty-second Street, and when complete will have cost upward of $500,000 for the building and its equipment, excluding the price paid for the site.

Chicago Dinner

The annual dinner of the alumni and former students of the University of Chicago will be held at the Breakers Hotel, Atlantic City, on the evening of Tuesday, February 26, 1918. Reports will be made regarding all the activities of the University. Especially interesting will be reports of participation in various forms of war activities by members of the Faculties and by students.

Tickets for the dinner are $2.00. They may be secured from Dean William S. Gray. If possible, they should be secured before Monday, February 25.

Labor Organizations and Vocational Education

Two clippings have come to hand this month which give such striking examples of labor's attitude on vocational education that they are reproduced. The first seems to show labor opposed to vocational schools. It is taken from the *Buffalo Express* and reports an interview secured during the meeting of the American Federation of Labor:

Secretary Berres, who is a member of the Federal Wage Adjustment Board, said yesterday that the metal trades department is opposed to the proposal

that schools be established for the training of mechanics to engage in trades necessary for the prosecution of the war. He said the men feel that, in the absence of a survey showing an actual labor shortage, these schools should not be established. They are opposed to an increase in the number of mechanics engaged in certain lines if the present number is adequate. They are looking ahead to conditions that will prevail in trades after the war. They do not want three or four men available for only one job, it is said.

"The men want to win the war and are co-operating to that end," said Secretary Berres, "but they do not believe that these schools should be established, at least not until it can be conclusively shown that there is a shortage of labor. That has not yet been proved. If there were not enough men in the trades essential to the successful prosecution of the war the situation would be different."

The second is from New Orleans:

If New Orleans is to be placed on an industrial parity with other great cities and develop its manufacturing and trade resources, vocational education on a modern and improved scale must be a part and an important part of its public-school system, is the view John T. Banville, president of the Central Trades and Labor Council, takes of the situation.

"I notice that of late there has been some discussion regarding vocational training as a great national issue," said Mr. Banville Sunday, "and I was interested, as I have felt the pulse of the labor movement in New Orleans and know that that pulse is throbbing in a desire to aid the movement for a vocational school in New Orleans.

"The laboring people of our city appreciate perhaps more than any other class the great good that would result to this community from vocational education. The laboring people saw in the splendid plan for the Delgado School a broad and easy highway to their future betterment, and the Central Trades and Labor Council was prompt to indorse it.

"Mayor Behrman has always been a champion of the public schools, and he has accomplished much with the limited means at his command. He has built schools for the people and advanced the cause of education generally, and now the laboring people are with him in the great scheme to develop vocational training.

"A great factor in the cause whose efforts are certain to have results is the Public School Alliance, and with all the forces, including Professor J. M. Gwinn, the superintendent, and the members of the School Board, combining their efforts toward one achievement the educational future of New Orleans seems assured.

"The working people, as I know them, are willing to make any sacrifice for the advancement of education, especially vocational education, and they are working now toward this end and will continue to do so until the goal is attained.

"Considered as a whole, I think that no greater blessing could come to the working people of New Orleans than vocational education, and I say again that the union men of New Orleans are willing to strive their hardest to bring this about."

If one reads these two clippings carefully, one gets a clear distinction. When labor unions are afraid that training is going to oversupply the labor market, then there is opposition; when this fear is removed, labor leaders, like all rational persons, are clear as to the advantages of vocational education.

The moral is not far to seek. Those who are trying to develop schools which will turn out hosts of cheap laborers are likely to meet opposition. Those who aim to promote real efficiency can secure co-operation for vocational education.

Junior High School for Fort Wayne

With the advent of a new superintendent at Fort Wayne, Indiana, comes the announcement of a reorganization of the schools so as to include a junior high school:

When the junior high school is established the first six grades will be known as the elementary grades. Another grade will be added to the eight now comprising the common branches. Subjects now taught in the high school, such as Spanish, English, other foreign languages, and vocational education, would be introduced into the seventh, eighth, and ninth grades, these three grades comprising the junior high school. Professor Himelick would shorten the regular high school one year, making it three years instead of four years as now.

"The junior high school simply brings the elective subjects to the student earlier in his education," explained Mr. Himelick. "It gives the student the benefit of high-school training who might not continue his education beyond what is now known as the common branches. Moreover, it will make our vocational school more popular. Many would start their technical training in the junior high school and continue it in the vocational school."

Reading Tests

The Bureau of Educational Measurements and Standards of Emporia, Kansas, announces a new series of reading tests, which are described in the preliminary circular as follows:

Enclosed with this announcement you will find sample copies of Tests I and II of a Standardized Reading Test. A third test of the series, for use in the high school, is being prepared and will probably be available as soon as orders are received.

It will be noted that this Standardized Silent Reading Test is similar to the Kansas Silent Reading Test which has proven to be very convenient to give

and which has been used very extensively. This test, however, differs in certain important respects.

First, the exercises have been selected from school readers and other books which children read, and it is believed that they furnish a reading situation which is more nearly normal.

Second, three duplicate forms of this test will be available for use. This will make it possible for one who wishes to give the test a second time to use a set of exercises which the children have not seen. The second form of the test will not be released before April 1, and it is expected to hold the third form at least until next September.

This test is just being issued, and for that reason has not been standardized. Just as soon as a sufficient number of reports have been received, standards will be issued and mailed to all who sent their scores to the Bureau of Educational Measurements and Standards.

The price of the Standardized Silent Reading Test is 40 cents per hundred copies. In ordering, please bear in mind that Test I is for Grades 3, 4, and 5, Test II for Grades 6, 7, and 8, and Test III for the high school.

THE COURSE IN PRINTING IN THE UNIVERSITY ELEMENTARY AND HIGH SCHOOLS, THE UNIVERSITY OF CHICAGO

KATHARINE M. STILWELL
University Elementary School

Printing has a place in the University Elementary and High schools because it is a means of general education. While both in the training it gives and in its commercial products it meets the demands of the vocational-training advocates, it may be classed with the humanistic studies because of its necessary dependence upon, and its close relation to, the other subjects in a school curriculum, especially history, civics, science, mathematics, literature, composition, and art.

In itself it offers an acquaintance with the world's sixth largest industry, one which is acknowledged an important factor in our civilization. As a practical school activity it affords a training that is suited to a pupil whether he looks forward to trade or to profession. This training is an asset in any vocation which demands power to think in terms of objects, a hand trained to express ideas susceptible of such expression, a cultivated artistic sense, an appreciation of honest work, and a feeling of social responsibility.

Although the aim is not the making of printers, it is nevertheless true that if a pupil wishes to go into the printing trade this training is valuable as a preparatory step.

Elementary instruction begins in the last semester of the fifth grade and is limited to two hours a week. It is continued for the same period of time through one semester of both the sixth and the seventh grades. It is required of both boys and girls. The working costume for small boys and all girls consists of a black sateen apron with sleeves. Large boys wear the short workman's apron with separate sleeve-protectors.

The printshop is adequately equipped with an 8×12 Chandler and Price Gordon job press, a 16-inch paper-cutter, fourteen case-

stands, and sufficient Caslon type of all sizes for the regular work of the classes, with enough type of other styles to enable the pupils to do any extra work desired. There are imposing-stones, cabinets, and all the smaller objects usually to be found in printshops.

METHOD

Methods of presentation vary with the grade and ability of the pupils, and with the shifting of the emphasis from one subject to another. The average fifth-grade pupil is more interested in the process than in the result. He likes the activity. If he makes pi of his work, it causes him very little concern. He is willing to do it all over again. So a group of fifth-grade pupils, or in some cases the entire class, may combine on a piece of work. The instruction given is largely oral, general directions to the class being followed by individual assistance as the need arises. In the sixth grade the instruction may be oral or printed or a combination of the two, according to the maturity of the particular class. When the printed directions are used in this grade they are supplemented by oral instruction in all the new problems. The older pupil likes to see his work grow as the result of his own efforts. His problem is individual. He is able to follow printed directions, and by the time he reaches the seventh grade this method is generally used in all the processes.

Excursions form part of the general plan in every grade. These excursions may be visits to modern printshops, engraving establishments, paper-mills, type foundries, libraries, museums—any source of first-hand information upon printing and its allied industries. The pupil is instinctively conscious of the vital relation existing between his printing and life in the outside world, but these visits enlarge his vision and give him a broad idea of printing as it exists today.

The printshop owns a number of slides which are used to show (1) the processes of manufacturing the materials necessary to printing, (2) copies of famous books, and (3) other works of printed art. The museum collection contains pictures of the printing processes that have been in use from the days of Gutenberg to the

present, pictures of early printshops, and tools and pictures of prominent printers. In addition there is in the printshop an exhibit of materials used in ancient and modern paper-making, type-casting, and related industries, with samples of various kinds of paper and examples of wood engravings. The pupils are encouraged to add to the printshop collection.

In the seventh grade special subjects are assigned for investigation, such as:

The Beginnings of Writing
Cursive and Book Hand
Early Illuminations
Cuneiform
The Book of Kells
Cadmus
Hittite Writing
The Plantin Museum
William Morris as a Printer
Block Books

In this work the pupil is assisted by his teachers of history and English. He writes the result of his investigations and prints it, thus sharing the knowledge he has acquired.

Rules for punctuation, spelling, the use of capital letters, and matters of usage of which the printer must have knowledge have been arranged in simple form and printed. This list the pupils use as a manual.

Throughout all the grades the teacher's idea is so to plan and present the subject that every pupil will work on his own initiative on some educative project. Any pupil who has followed the work outlined in the fifth, sixth, and seventh grades should, at the close of the seventh year, be familiar with the history of printing and know what can be done with printing materials. He should be able to design and present in graphic form a plan for printing simple work which is within the capacity of the school press, and should have sufficient skill to carry out that plan. He should have a standard—that is, he should know what constitutes good printing.

OUTLINE

FIFTH GRADE

I. Learning the case

1. Exercise in paper-folding preparatory to (2)
2. Drawing case to scale
3. Setting up the letters in each box

From this exercise should result:

a) Proper standing position
b) Correct holding of the stick
c) Knowledge of the lay of the case
d) Knowing the type—its parts
e) Ability to read the type upside down
f) Recognition of spaces by sight and by touch
g) Some skill in handling type

II. Setting type

The drill secured while learning the case enables the pupil to work with intelligence and with a degree of skill even in his first attempts at composition. The first work is done with 18-pt. and 14-pt. type; later 12-pt. may be used.

The work consists of setting up:

1. Poems—short lines
2. Prose—reading-lessons for the first grade which occur in one-sentence paragraphs
3. Verse—arranged on a card

Through these exercises the pupil learns:

a) Even spacing between words
b) The filling out of an uncompleted line with quadrats and spaces
c) Indention—The alignment of rhyming lines
d) The use of leads
e) The pica as a unit of measurement
f) The point system
g) Method of tying up type and handling type masses
h) Proofreaders' marks; how to mark a proof and correct mistakes in the type

III. Feeding the press

The pupils in this grade handle sheets of paper not larger than $6\frac{1}{4} \times 9\frac{1}{2}$ inches. They feed cards also, using a thimble made of sandpaper. The pupils may observe the processes of locking up and making ready. They execute only the following steps:

1. Putting the chase into the press

2. Feeding the single sheets. A direct, economical movement is required
3. Taking out the chase, washing the type, and putting away the furniture and chase

IV. Special work on the school magazine

1. Setting up centered titles and running-heads
2. Folding and placing the printed sheets and sewing the mazagine

V. Reading

Articles on the following topics have been prepared by the teacher:

1. Early Methods of Keeping Records
2. The Work of the Scribes and Monks
3. Block Books
4. The Story of Gutenberg
5. Laurence Coster
6. Benjamin Franklin as a Printer

VI. Art

The following points are emphasized:

1. Harmony of shape between the type mass and the paper
2. Placement of the type mass on the page. The width of margins
3. Arrangement of cards, Christmas, Easter, Valentine, or birthday
4. Drawings for the school magazine

SIXTH GRADE

The work begun in the fifth grade continues throughout the sixth grade with the emphasis placed upon the added topics indicated in the following outline:

I. Composition

The work is done with 12-pt. type, although there may be occasional use of other sizes if the work demands it.

1. Practice is given in setting:
   a) Poetry—Such poems as are needed in any department of the school, or any poem the pupil desires to print
   b) Prose—One or more paragraphs of any required matter may be set up. This grade composes many simple announcements, such as notices for parents' meetings, invitations, and office-hour cards for the administrative officers
2. Practice is given in taking proofs

The pupils take proofs of their work after they have corrected all the mistakes they can see in the type. They mark the proof according to accepted proofreaders' marks and make the necessary changes in the type.

II. Presswork
1. Locking up. This consists of single pages, locked under direction
2. Feeding the press. The sheets may be the full size of the press (8×12 inches)
3. Removing the chase and cleaning the type preparatory to distributing
4. Cleaning and oiling the press

This is done only under the teacher's direction.

III. Distribution of type

The distribution begins in this grade by taking up one line at a time. When the pupil has become skilful he handles more than one line.

IV. Special work on the school magazine
1. Setting table of contents
2. Assisting with the presswork
3. Folding and sewing

V. Reading

Articles prepared by the teacher for reading in this grade consist of:
1. A Mediaeval Library
2. Foundry-Cast Type
3. The Making of Magazine Illustrations. Wood Engraving
4. Paper-Making, Ancient and Modern

VI. Art
1. Making of a "layout" for work to be done
2. Designing simple units for cards or for the school magazine. The effect of the line of the drawing on the tone harmony of the print
3. Free-hand lettering and spacing, single words and notices
4. Visiting collections of mediaeval manuscripts
5. Studying examples of fine printing, both ancient and modern
6. Collecting pictures which illustrate early methods of making books

SEVENTH GRADE

The instruction in this grade centers upon prose composition and presswork.

I. Composition

The regular work is done with 12-pt. or 10-pt. type, other sizes being used as it becomes necessary.

1. Poetry

Besides printing poems needed in the school, this grade prints booklets of original verse.

2. Prose

Refinement of spacing begins to show in the seventh grade. The prose work is presented through a variety of problems, among them

reading-lessons for other grades, programs, letterheads, cards requiring the use of horizontal rules, initial letters, original plays, and calendars. Printed "Directions for Composition" are followed by the pupils.

II. Presswork

There is great advance in the presswork in this grade. The interest which the pupils show in the press as a machine is utilized by the science teacher in the work on mechanics. Here, as in composition, printed directions are put into the hands of the pupils, who are thus enabled to work independently. The following processes are carried on by the pupils:

1. Locking up
2. Making ready
3. Feeding
4. Washing type
5. Cleaning the press

III. Distribution

Pupils not only distribute their own dead type, but help in the work of the younger pupils. Printed directions are given.

IV. Work on the school magazine

This grade has charge of the editorial and business management of the *School Reporter*, as well as the work in composition.

Pupils from other grades assist in the straight composition, but this class concludes the work by:

1. Setting the editorial page
2. Making up pages
3. Taking page-proofs and making a "dummy"
4. Presswork

V. Reading

The reading for this grade is prepared as for the previous grades. The special topics are:

1. The Press—Platen and Cylinder
2. Composition of Ink
3. Making of Rollers
4. Machine Composition—Linotype and Monotype
5. The Printing of a Modern Newspaper

VI. Art

1. Making a "layout" for any job attempted
2. Planning a booklet of original verse or prose
3. Study of title-pages
4. Drawing units and cutting them in wood for use on card or booklet
5. Making zinc-plate (See science outline)

6. Setting an initial letter
7. Printing in colors
8. Free-hand lettering. Space and letter short quotation using a large initial
9. Arranging a cover design involving the use of a decorative unit
10. Studying harmony of tone—upon what it depends

HIGH SCHOOL

Printing is not a required study in the University High School, but it may be elected under the same conditions as hold in the other shops. Pupils choosing this subject devote to it five hours a week. The following outline covers the work attempted:

1. The case
   a) Lay of type
   b) Correct posture of body
2. The point system
3. Type families
4. Straight-matter composition
   a) Spaces, grades, leads, and slugs
   b) Indention, rules for English as applied in the shop
   c) Correction of errors
5. Proofreaders' marks
6. Margins
7. Paging
8. Elementary imposition
9. Tabular composition
10. Borders—ornaments
11. Principles of design as applied to printing
12. Presswork
13. Study of paper
14. Illustrations
15. Use of color in printing

In a general way the work chosen consists of poetry or prose to be arranged in some desired form. Original compositions, programs, constitutions and rules of the Boys' Club and the Girls' Club, business cards for the *Midway*, announcements of school exercises, envelopes and letterheads, shop cards, and admission tickets are among the specific jobs selected.

Correct spacing (apparently even) and good design are demanded of all high-school pupils.

METHOD

Pupils with no previous experience must begin as do the elementary-school pupils. But the maturity of high-school students enables them to make more rapid progress, and when they have secured control of their materials they follow the regular high-school work.

The high-school course is a continuation of the work done in the grades, but with more independence of thought and action on the part of the student and more refinement of method in work. Much more leeway in the selection of his work is permitted the high-school student than is granted to the pupil in the grades. This is possible because the high-school student himself feels a definite need for printing certain things. His work is largely personal. He wants a copy of his club constitution, he requires tickets and programs for his class entertainments, he wishes cards or notices to advertise some private interest, or he collects his own writings and puts them forth in an artistic form. So he chooses, within limits, the thing he wishes to print, plans his "layout," makes his own decorations, selects the type, the color of ink, and paper of such color and quality as he considers suitable. He confers with the various teachers concerned, getting whatever assistance he requires to do the work he has planned. His standard of result is high because the work is for himself or his fellows.

It is the office of the teacher to criticize, to suggest improvements; and, through the pupil's necessity for knowing a particular detail, to bring to his knowledge the general laws underlying his work.

BOOKS OF REFERENCE

Dictionary
Manual of Style, The University of Chicago Press
Periodicals: *Printing Art, Inland Printer*
Woolley, *Handbook of Composition*
Hitchcock, *Building the Book*
All the DeVinne books on printing
Edward Johnston, *Writing and Illuminating and Lettering*
A. A. Stewart, *The Features of a Printed Book*
Books by Adele Millicent Smith
Bouchet, *The Printed Book*

KINDS OF WORK TO BE PRINTED

All work to be printed is chosen with reference to (1) the technical skill of the pupil and (2) the social value of the product. No printing has ever been done in the School of Education printshop that had not a distinct social value which was recognized by the pupils who did the printing.

The following is a partial list of the kinds of work that have proved suitable for school printshops:

I. For use in the school

Programs	School paper
Invitations	Report blanks
Announcements of all kinds	Calendars
Poems (for literature classes)	Menu cards
Words to songs (for music classes)	Outlines of work
Reading-lessons (for grades)	Cooking receipts
Library cards	Candy receipts
Collections of original poems (booklets)	Admission tickets
Plays (original)	Club constitutions
Labels	Phonics lists
Mothers' club announcements	Shop cards

II. For use in home or community

Business cards	Sunday-school programs
Social-settlement announcements	Church services
Letterheads	Shopping cards
Billheads	Illustrations of various kinds

III. For personal use

Christmas cards	Own compositions—verse and prose
Easter cards	Letterheads
Valentines	Favorite poems or sentiments
Birthday cards	Blotters

THE PLAN OF MEASURING EDUCATIONAL EFFICIENCY IN BAY CITY

FRANKLIN BOBBITT
University of Chicago

How can the superintendent of a considerable city know whether the results secured in the different ward buildings are kept up to standard in each of them? With so complicated an organization to direct and with such a complexity of results to be secured in every portion of it, how can the superintendent keep his finger on all the work continuously and keep himself sufficiently informed as to the efficacy of every portion of it?

The logic of the present measuring movement in the educational field is simple and irresistible. The problem before the practical superintendent is how to measure the results in all subjects with sufficient economy, expeditiousness, and frequency. Many of the standardized tests are expensive in both time and money. Some of them lose their efficacy if given frequently. For certain of the more important, especially in the more advanced work, standardized tests have not yet been prepared.

The practical superintendent, however, has his daily, weekly, and monthly task before him. He cannot wait until the standardized tests are worked out for the entire field. Accepting the logic of the measuring movement as sound, he must find something practicable to use until the expert measurers are able to give him something better. Even where standardized tests are in the field, he must sometimes employ a rough substitute because of the expensiveness in time and money of the elaborate tests.

An interesting plan of doing the work under such conditions was recently observed by the writer in the schools of Bay City, Michigan. It was devised by Superintendent Frank A. Gause and introduced in the autumn of 1915. After a two years' test, Superintendent Gause expresses satisfaction with the results.

The test, like most of the standard ones, is a modified examination test. In each elementary-school subject a single question is devised as the test of the work of the past month. All of these single questions are then placed on a single examination sheet, and the children write upon all of them as a single test for which a definite and uniform amount of time is given. The following is a sample of the test papers:

GRADE 6 B

Arithmetic:

A farm is 90 rods long and 60 rods wide. Find number of acres in it. Find the cost at $60.00 per acre.

Grammar:

Fill blanks with correct form:

1. It is.....(I or me)
2. We are.....(they or them)
3. It was.....(he or him)
4. I am.....(she or her)

Geography:

Choose one:

1. Make a list of five articles which are manufactured in Bay City.
2. Why did the first settlers come to Bay City?

Hygiene:

Mention some means by which the Board of Health protects the public.

History:

Choose one:

1. What permanent English institution was founded in Edward I's reign?
2. What was the purpose of the Crusades? Briefly tell the story of the Crusader you admire most.

Reading:

Would you like to work for Scoorge? Why?

Spelling:

address	children	thought
promote	doctor	

The question will arise as to the validity of a one-question test. In this connection it must first be mentioned that the test is devised for the measurement of classes and not individual pupils. Superintendent and principals want to find the teachers who are, and

those who are not, keeping their classes as a whole up to standard. Now a single carefully chosen question may not be fair for any particular pupil in a class; but if the question is accurately related to the work of the class as a whole, the law of statistical averages enters in. In a class of forty pupils, even though there is but the one question, there will be forty papers as a measure of the work of that class. The average of the forty, it is claimed, is a fair average of the standing of the class as a whole.

One of the most suggestive features of this plan is the mode of selecting the questions that are used. The city employs a uniform course of study and a uniform series of textbooks. This naturally greatly facilitates the employment of such a testing plan. Whether such uniformity is desirable or not is a question not here discussed. The test is devised with the presumption of reasonable uniformity of curriculum throughout the city. In this respect this test does not differ from the more accurate, standardized tests in general. In practically all cases in their setting up of standards, in their providing for comparison among classes, buildings, and cities, etc., they clearly assume uniformity of curriculum.

But even where there is a uniform course of study and textbooks, because of local conditions there is some, and sometimes considerable, diversity in the amount of ground covered and in the content of the work done. An examination made out in the superintendent's office on the basis only of the prescribed sections of the course of study might be actually suited to the work that is done within one school, and at the same time be a very unfair test for the work going on in other buildings. The plan employed in Bay City took this aspect of the situation into careful consideration. The original questions are not made out in the office of the superintendent. They are made out by the teachers themselves in the various classrooms of the city. Previous to the giving of the test, each teacher makes out a set of questions for each subject which she regards as a fair test of the work that has been done in her class during the previous month. All of these questions are sent in from all of the buildings to the central office. Then from these contributed questions, the special teacher who has charge of the testing work together with the superintendent select for each subject

in each grade one question which, as revealed by the various papers sent in, is considered satisfactory for every building in the city. They are trying, for example, to select a proper question for 6B geography. They take the 6B list of geography questions sent in from the sixteen buildings of the city and select a question that is common to all of the lists, or one which from the questions presented would appear to be satisfactory for each of the buildings. Where it seems impossible to agree upon a single question on the basis of the papers before them, they choose two or three questions of as nearly equal difficulty as possible and permit the teacher to chose the question upon which the pupils will write.

Certain valuable by-products of this method are to be observed. The questions sent in by the teachers present to the superintendent a monthly indication of what the teachers in each classroom consider the essential features of their work. This permits the superintendent to see how well the various buildings are keeping abreast of one another in carrying out the prescribed work. It thus shows him the buildings where overambitious individuals appear to be driving too hard, or doing the work superficially, as revealed by their covering the ground too rapidly. It also shows the laggards in the march and points out where he should bring pressure to bear or improve the conditions by way of speeding up the work. Where buildings are properly moving abreast of one another, the questions reveal the relative emphases in the different buildings. The superintendent thus can know whether it is the essentials that are receiving the major emphasis or the peripheral matters of less significance. When teachers know that their work is currently revealed by the questions submitted as well as by the later results of the tests, naturally they are led to careful thought in the planning of the month's work.

As a matter of fact, one of the objections to the examination plan as a mode of testing results has been that we have never developed any adequate technique for the drawing up of the questions. In Bay City they are devising such a technique. Many of our standardized tests are nothing but modified examinations in which the problems, questions, or other tasks have been selected through the employment of a definite and appropriate technique.

During the first year of the plan, the tests were given every two months. During the past year the tests have been given monthly. We find here a partial answer to the single-question objection. This monthly plan enables each pupil during the year to write upon nine questions in each subject; and a class of forty pupils to present in any single subject a total of 360 papers as the measure of its work in the subject for the year. It would appear that this is a fairly adequate measure of the effectiveness of the work.

The exact date of giving the test is not previously announced to the building. The testing is all done by three specially trained teachers, and no portion of it is given over to the principal or teachers in the building. The latter are present during the test for assisting in the work. The details of the testing are well described in an unpublished report by Miss Adelaide Lawrence, who has had charge of the details of the work since its inception:

> Three teachers are given the questions and told to cover the ground as quickly as possible. The city schools, fortunately, are so situated that these three teachers can visit all three buildings in the south end of the city, then move to the central portion of the city with its three buildings, and finally to the north end of the city with its three buildings. This covers all of the buildings on one side of the river. The schools across the river can be covered in like manner in similar sections. There is little chance for the questions to travel on ahead. No principal or teacher in the system is advised as to when the tests are to be given. Upon the arrival of the test teachers in the building, however, word is sent to the various grade teachers as to the testing schedule, and papers are already headed with the name, grade, and school when the tester makes her appearance in the room. Upon her arrival, the test questions are immediately placed upon the blackboard, and from that moment no pupil is allowed to ask a question nor any teacher permitted any comment. A limited time is given for every subject and that time is kept uniform for the grades throughout the city. At the end of the allotted time, the papers, finished or unfinished, are collected.

Upon leaving the classroom they carry the papers with them. All of them are taken to the central office, where they are marked by these special teachers themselves. This permits a uniformity in the marking standards employed for all of the buildings in the city.

The results are tabulated in such a way as to show the relative standing of the different classes throughout the city. These are

combined so as then to show the relative standing of the different buildings. The superintendent thus gets a line on the relative efficacy both of the teachers and of the principals.

As these comparative statements are drawn up, it cannot be expected that all buildings of the city, differently situated as they are, shall all rise to the same level of accomplishment. Naturally they will distribute themselves from high to relatively low. As the monthly summaries are drawn up, however, month after month and year after year, it will be possible to discover the relative level that seems appropriate for each particular building. The monthly comparative results can then be used for the purpose, not of seeing whether all of the buildings of the city are rising to the same level of accomplishment, but whether in the general distribution which seems appropriate for the city each building is holding its own, or in other words, keeping the level which has been shown to be its appropriate position.

Three types of reports are sent monthly to the buildings. The first type is shown in Table I.

To each building is sent the record of its accomplishment in the test. In Table I the heavy-face figures present the record of the Trombley School—one of the schools that in this test stood very near the top of the list. The light-face figures in the table show the average for the entire city in the same test. The principal upon receiving such a report can read across the horizontal lines for each of the grades and see whether or not the work in his building is keeping up to the average. By reading across the lowest horizontal column he can discern whether he has kept the rank which previous experience has shown to be appropriate for his school. This table shows that the Trombley School in this particular test stood sixth in arithmetic among the sixteen schools of the city; fifth in language; first in spelling; second in geography; second in hygiene; first in history; first in reading; and second in its general ranking in all subjects. The principal can read down the vertical columns and discover the grades that appear to be doing the best work in his building as compared with the average of the city, and those that appear to be falling below the standard.

It is these records that in the ultimate analysis will determine whether the one-question plan of giving the test, or whether any such examination test, even if more questions are used, will actually serve the purposes for which this work is done. There is really considerable inertia in the standing of any given class throughout the year or of any given building. If these reports over a series

TABLE I

AVERAGES OF THE TROMBLEY SCHOOL

Grade	Arithmetic	Language	Spelling	Geography	Hygiene	History	Reading	Average
5B	73 **100**	93 **98**	88 **94**	87 **96**	81 **99**	85 **97**	95 **100**	86.11 **97.71**
5A	82 **93**	94 **98**	92 **100**	88 **90**	59 **97**	91 **99**	91 **97**	85.38 **96.28**
6B	44 **90**	93 **98**	98 **100**	90 **91**	73 **77**	91 **99**	94 **99**	83.29 **93.42**
6A	50 **0**	89 **94**	88 **94**	85 **90**	91 **83**	90 **98**	92 **99**	83.54 **79.71**
7B	87 **100**	84 **88**	95 **96**	82 **88**	81 **91**	90 **99**	89 **99**	86.88 **94.42**
7A	93 **100**	92 **96**	94 **100**	90 **98**	92 **95**	93 **99**	99 **100**	93.36 **98.28**
8B	95 **100**	87 **87**	95 **98**	.....	85 **84**	92 **99**	97 **100**	92.11 **94.66**
8A	93 **100**	91 **88**	94 **100**	.....	84 **70**	94 **99**	92 **99**	91.47 **92.66**
Average	77 **85**	90 **93**	93 **98**	87 **92**	81 **87**	91 **99**	94 **99**	86.76 **93.39**
Rank	**6**	**5**	**1**	**2**	**2**	**1**	**1**	**2**

(Averages of the Trombley School in heavy-faced type. City averages in light-face type. Decimals in most cases omitted in the printing.)

of months and years show that the relative standing of certain buildings should be high, others medium, others low; and if the tables then reveal month after month a relative inertia of classes and buildings, the validity of the plan will thereby be indicated. In the degree in which buildings fluctuate from month to month in their relative standing, being now high and now low, and then

again high, the evidence is against the validity of the method. Figures at hand do not yet present conclusive evidence one way or the other.

After each monthly test a list of buildings like that of Table II is sent to all of the buildings. It represents the roll of honor. It shows the buildings that have ranked highest in the work of each grade in each subject and in the averages of grades and subjects. Reading across the horizontal lines each principal can know where the best work is presumably being done in each grade and subject. The lowest horizontal column shows that in the average in all grades in arithmetic the highest ranking building is the Riegel; in language, the Corbin; in spelling, the Trombley; etc. Where the two averages coincide, we find the names of the buildings that have stood highest in the total results of the test. In this particular test the Riegel stood first among the buildings of the city; the Trombley, second; and the Farragut, third. The names of those receiving mediocre or low ranking are not sent out.

One of the values of this report mentioned by the superintendent is the stimulation of the various buildings. Each likes to see its name upon this roll of honor as numerously and frequently as possible. A second value relates to the bringing up of the work in buildings where it is shown to be poor. One of the best modes of training the weak teacher is to have her go and observe work of the character that she ought to be carrying on in her own classroom. Such a list shows where the visiting teachers can be sent with the greatest promise. Naturally this argument is somewhat vitiated by the different standards appropriate to schools in different situations. The very best teachers may sometimes be in a school that never can hope to reach the top in the character of the results secured. This points to the possible desirability of making some modification of the plan of determining the monthly roll of honor.

The third type of report sent to each building shows the names of pupils who have failed upon the examination. No claim is made that this presents an adequate test of individual pupils. It is some help, however, especially after the records have accumulated for a number of months. Each teacher presumably knows who the poorest pupils of the class are. But when the class record has been

TABLE II

THE HIGHEST-RANKING BUILDINGS

	Arithmetic	Language	Spelling	Geography	Hygiene	History	Reading	Highest Average
5B	Fremont Corbin Trombley	Riegel	Riegel	Sherman	Corbin	Lincoln Trombley	Farragut Kolb Wenona	*Trombley*
5A	Woodside Washington Corbin	Garfield Park Corbin	Sherman Washington Whittier	Trombley	Trombley	Trombley	Trombley	*Trombley*
6B	Riegel	Riegel Sherman Dolsen	Riegel Park Corbin	Fremont	Trombley	Trombley	Wenona Park Trombley	*Riegel*
6A	Farragut Garfield	Sherman Washington Whittier	Sherman	Fremont	McKinley	Fremont Trombley	Kolb Trombley	*Farragut*
7B	Dolsen Whittier McKinley	Whittier	Washington McKinley Whittier	Riegel	Farragut	Fremont Trombley	Sherman Garfield Trombley	*Trombley*
7A		Kolb	McKinley Trombley	Sherman Fremont	Trombley	Fremont Trombley	Sherman Farragut Garfield	*Trombley*
8B		Riegel	Sherman Park		Sherman	Lincoln Kolb Wenona	Woodside Sherman Dolsen	*Farragut*
8A		Garfield McKinley	Sherman Riegel Trombley		Woodside Riegel	Woodside Farragut Wenona	Trombley	*Riegel*
Highest Average	Riegel	Corbin	Trombley	Fremont	Riegel	Trombley	Trombley	Riegel Trombley Farragut

TABLE III

FAILED IN TROMBLEY SCHOOL

Arithmetic	Language	Spelling	Hygiene	Geography	History	Reading
5A S. Gonyaw—0 6B B. Frazier—0 6A All failed	6B C. Bosse—75 7B R. Mattison—60 8B F. Miller—70 C. Hitchcock—70 8A T. Doyle—70	5B J. Bowden—60 6A E. Headings—60	6B C. Bosse—50 M. Alexander—70 F. Doyle—70 6A E. Headings—70 8A J. Merry—70 T. Doyle—65 A. Rosebush—70	5B L. Evans—70 A. Larson—50	None failed	None failed

brought down by low averages on the part of individual pupils, she wants to know exactly who has been responsible for bringing down this class average. The sending of this list of names to her enables her to focus her efforts upon the points which have been actually responsible for the losses; and to stimulate her in her efforts to bring up others in the class who are likely to do the same sort of thing upon the next test.

The superintendent keeps two types of graphic charts in his office for his own assistance and for the inspection of all who care to examine them. Chart I shows the relative standing of each building in the city for the six tests given during the first semester of the year 1916–17. Each number represents the name of a building. The chart shows the average level of standing in all subjects tested. The September standing was relatively low, and the buildings were much scattered along the scale. Either the test was unusually difficult or the pupils at the end of the first month had not got under way. But since for supervisory purposes relative standing is rather more important than absolute standing, this may not greatly matter. If the test is a valid one, such a chart ought in time to reveal the rightful relative level of each building; and whether the buildings each month come up to their several expected relative levels.

Another type of large graphic chart kept permanently in the superintendent's office is illustrated in Chart II. This shows the relative standing of the arithmetic teachers in the city system as regards their ability to get results. It permits any teacher of arithmetic, or rather any group of arithmetic teachers in a single building, to see how they stand as compared with the other arithmetic teachers in the other buildings. The chart shows a very considerable degree of consistency in the relative standing of teachers in different buildings throughout the semester. The work of the two teachers in Building 8 is consistently low. That of the two teachers in Building 15 or of the three teachers in Building 10 is consistently high. Except for the fourth month, Building 6 is consistently mediocre. Although the chart shows Building 4 apparently to plunge about rather violently, yet, as a matter of fact, the record is consistent, except for the single month of test

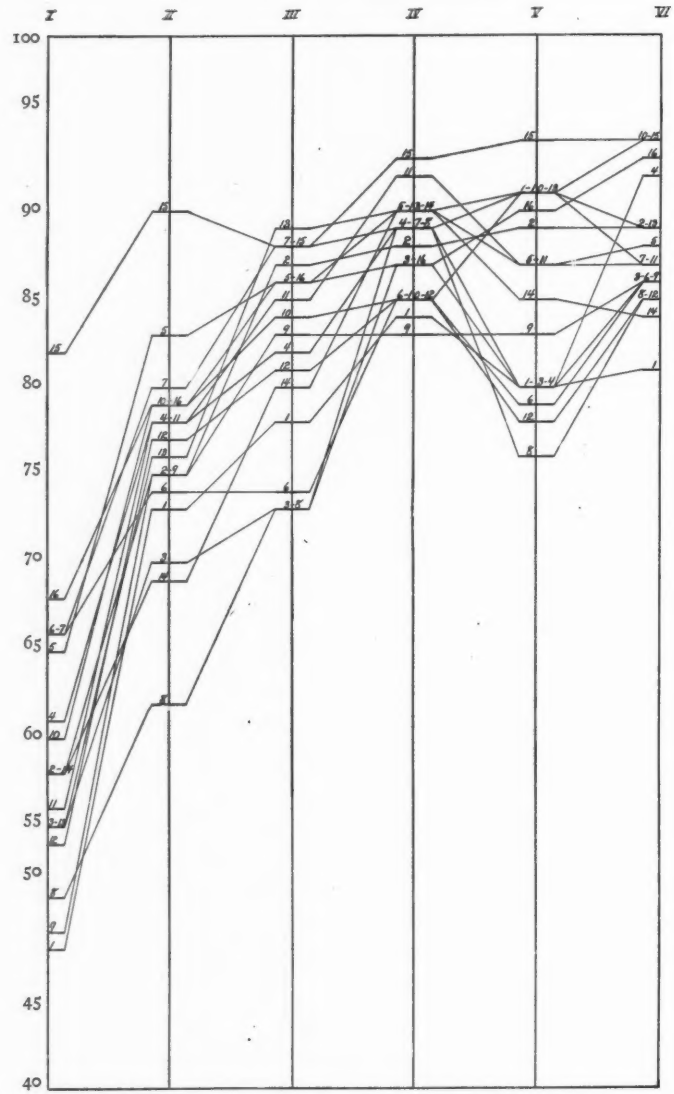

CHART I.—Relative average standing of the sixteen buildings in six consecutive monthly tests.

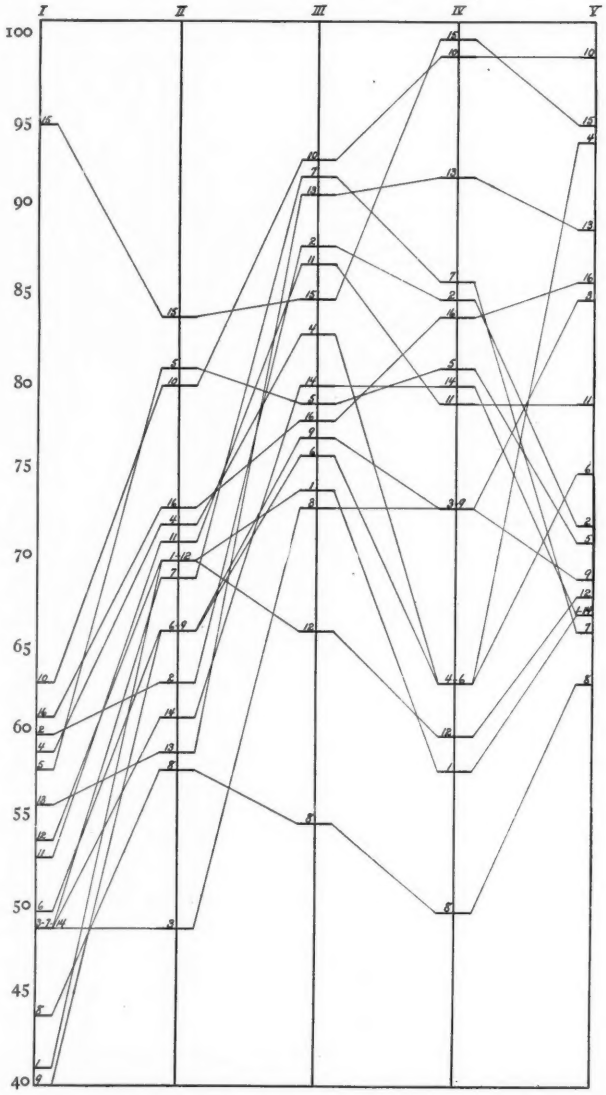

CHART II.—Relative standing of the sixteen buildings in *Arithmetic* in five consecutive monthly tests.

Number IV. It appears that some untoward circumstance entered in to give a probably wrong standing for that month. The perfecting of the plan naturally must lead to the elimination of most of such possibilities of accidental standing. Other charts, similar to this for arithmetic, are kept for each of the other subjects.

Superintendent Gause refers to this as a "tentative plan." He urges no finality for the details. It is clear, however, that it possesses many excellent features that must inhere in any well-developed system of measurement. Like the educational measurers of every type, one of his major tasks now is the discovery and elimination of shortcomings and defects. The various programs of measurement attacking the problem from various angles will tend to complete each other and in the end to bring forth a finished workable plan.

THE BEGINNING OF FORMAL NUMBER WORK

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Most courses of study make work in number incidental in the first year. By this provision the teaching of number depends at first on the needs which the school presents for the use of number. These are really very few. Counting the number of pupils in a row for the distribution of materials is a genuine demand for the use of number. The "helper," having six pupils in his row, brings six boxes and gives a box to each pupil. Counting the number of words as the vocabulary increases and the number of pupils present each half-day is a means of determining facts of interest. This counting may serve as incentive for adding to vocabulary and for regularity in attendance. The number work for the first half-year is usually limited to oral counting of objects to meet number demands of the school.

In the second half of the first school year the oral counting to meet school needs is continued, and ingenuity is exercised to use number, without taxing the pupil's ability, in a way to lay a foundation for subsequent work. The pupils learn to give the number of the pages of their reading-books. They learn to recognize the printed names of numbers from one to ten and the figures as representing numbers. They learn to make figures and by the use of inch sticks, lentils, or pictures indicate concretely the number for which each stands. This is merely perceptual learning. The process in learning to recognize the word "four" or the figure "4" is not different from that in learning to recognize the word "bird."

The second school year usually begins dealing more formally with number relations and attempts abstraction. In the second (and each subsequent year in the primary grades) the teacher must not lose sight of the two phases of number work—that of using number for immediate needs and that of gaining control over the

symbols of number. Advantage should be taken of all opportunities for using number. They occur in measuring and making booklets, seed envelopes, card boxes, calendars, in other forms of construction, and in counting and keeping the score in games. The formal work may be introduced in answer to some need. A pupil must learn to make figures well and rapidly, but the immediate end may be set up of learning to make figures well and rapidly in order to keep the score in games. The formal teaching of number begins, practically, in the second year. The pupil's equipment is the ability to count objects and to recognize figures. This ability varies in different pupils, but in each case it forms the basis from which to proceed. Counting, repeating the number names in a series, is the primitive response to a "how many" stimulus. It is customary to teach second-grade pupils to count to one hundred orally and to write figures to one hundred. In the writing, for convenience, the figures are often grouped in tens.

It is possible to use this device much more effectively than is usually done. If, before emphasizing the oral counting, the pupil can have in his hand a number scale in large, clear figures, as in Table I,[1] time will be economized.

The counting should be first from this scale, so that each number name corresponds to a symbol. When the child says "eleven, twelve, thirteen, fourteen," he looks at the figures "11, 12, 13, 14." He thus organizes the numbers 1–100, so that the numbers have certain space relationships in his mind and can be easily recalled. The work on *form* must follow and grow from work which is concrete. These tables, through the visualization of symbols and space relationships of numbers, are designed to assist in the process of abstraction. If in counting from memory the pupil hesitates, he should look at once at his number scale, and, as in the beginning, read the figures, after which he can repeat them readily. Visualization should be emphasized in the early formal work.

The first counting should be by 1's; begin at 1, count to 100. Follow by counting in groups of 10; in the last column, J, begin with 10, count to 100; first column, A, begin with 1 and count by

[1] The exact style of figures to be used is shown in Table I. In the other tables a different type is used to save space.

10's to 91; in the same way count each column by 10's. Count each column in reverse order, for example, in column B begin at 92, count to 2. Pupils should learn to write figures to 100. An immediate use is the making of inch-square number cards on gray bogus paper. These are kept in boxes or trays and furnish a profitable form of seat work. The pupils place the cards on the desk to show the groups of 10's, A–J.

TABLE I

NUMBER SCALE

	A	B	C	D	E	F	G	H	I	J
1)	1	2	3	4	5	6	7	8	9	10
2)	11	12	13	14	15	16	17	18	19	20
3)	21	22	23	24	25	26	27	28	29	30
4)	31	32	33	34	35	36	37	38	39	40
5)	41	42	43	44	45	46	47	48	49	50
6)	51	52	53	54	55	56	57	58	59	60
7)	61	62	63	64	65	66	67	68	69	70
8)	71	72	73	74	75	76	77	78	79	80
9)	81	82	83	84	85	86	87	88	89	90
10)	91	92	93	94	95	96	97	98	99	100

For diversity in grouping Table II is given. Each group of 10's is arranged in vertical instead of horizontal lines. It is used in the same way.

Following the counting by 1's, 10's, and 5's, count by 2's. Beginning with zero touch, while counting, the even numbers; beginning with 1 touch, while counting, the odd numbers. Subsequently count from memory. Count by 3's and by 4's through

the first three or four groups. Count by adding to lines A–J numbers 1 to 9, as, add 4 to each number in line E: 5 plus 4 equal 9, 15 plus 4 equal 19, 25 plus 4 equal 29, to 95 plus 4 equal 99; subtract, similarly, as in Table I, column C, 3 minus 3 equals zero, 13 minus 3 equals 10, to 93 minus 3 equals 90. Following actual subtraction with objects this scale may be used to advantage with pupils who are unable to make the abstraction readily. For example, in the problem 9 minus 5, begin at 9 in row (1); count back 1, 2, 3, 4, 5; the figure 4 indicates the number that remains; also, the places 1, 2, 3, 4 show it.

TABLE II

NUMBER SCALE

A—	1	11	21	31	41	51	61	71	81	91
B—	2	12	22	32	42	52	62	72	82	92
C—	3	13	23	33	43	53	63	73	83	93
D—	4	14	24	34	44	54	64	74	84	94
E—	5	15	25	35	45	55	65	75	85	95
F—	6	16	26	36	46	56	66	76	86	96
G—	7	17	27	37	47	57	67	77	87	97
H—	8	18	28	38	48	58	68	78	88	98
I—	9	19	29	39	49	59	69	79	89	99
J—	10	20	30	40	50	60	70	80	90	100

The intention of Table III is to lessen the difficulties of learning the addition combinations by building them up by counting and by showing them all upon one page. It often seems that pupils become lost in the maze of addition combinations and experience the uncertainty and distress of one who has lost his way. The pupil does not know what new combinations may leap out at him from the region of unknown things. But if he sees the primary sums, *all* of them, and learns that there are only forty-five, the task of learning them becomes much more definite and possible. After the combinations have been learned by counting, as in columns A to I, Table III, is useful in speed drills. A class goes to the board with instructions to write column (3). The pupils begin at a signal. The one who finishes first says "1," and makes the figure "1" over his work. Each, as he finishes, announces and records his place.

The teacher checks on accuracy. At the end of the recitation it is of interest to observe the different scores. The teacher should try to account, to herself at least, and by observation while the

TABLE III

THE 45 PRIMARY SUMS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
A	1 1	2 1	3 1	4 1	5 1	6 1	7 1	8 1	9 1
B	2 2	3 2	4 2	5 2	6 2	7 2	8 2	9 2	
C	3 3	4 3	5 3	6 3	7 3	8 3	9 3		
D	4 4	5 4	6 4	7 4	8 4	9 4			
E	5 5	6 5	7 5	8 5	9 5				
F	6 6	7 6	8 6	9 6					
G	7 7	8 7	9 7						
H	8 8	9 8							
I	9 9								

work is in progress, for the variation in speed of a given pupil, for example, if the score is 1–4–2–1, why did the pupil drop to fourth place in the second exercise? In using Table III at the desks the pupils build the primary sums with their inch-square number cards, varying the order each day.

Subtraction is developed by counting, using Table III, as 1 minus 1 equals zero, 2 minus 1 equals 1, continuing through columns A to I.

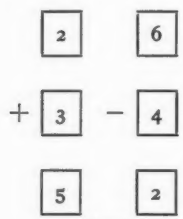
Table IV presents the differences in varying order. The pupils are encouraged to arrange the "problems" in a different order each day when placing them on their desks with inch-square number cards. It is very important that the addition and subtraction processes be closely associated. When 4 and 3 are combined to make 7, at once separate each addend from the sum; 7 minus 3 equals 4, 7 minus 4 equals 3.

TABLE IV

THE 45 PRIMARY DIFFERENCES

	1	2	3	4	5	6	7	8	9
A	1	2	3	1	2	4	1	3	1
B		1	2	4	5	2	5	2	7
C			1	3	3	5	3	1	9
D				2	4	3	4	6	4
E					1	6	2	8	5
F						1	7	4	6
G							6	7	3
H								5	8
I									2

After inspection and correction of "problems" laid upon the desk with inch-square number cards, the inch sticks being used to indicate (+, −) the sums and differences, an exercise to increase speed may be given. The pupils are instructed to gather the answer cards into a heap, thus mixing them, leaving the problems in orderly rows on the desks. At a signal the pupils begin placing the "answer" cards in position. Each pupil stands as soon as he has accomplished this task. The teacher keeps the score. On a properly ruled chart upon which the pupils' names are written, she records the order in which the pupils stand and the time in minutes or seconds. In trying to be first to stand, each pupil gets a review of the whole number lesson and discovers the combinations which retard him most. He has now a motive for drilling upon these. He is anxious to know all the combinations before



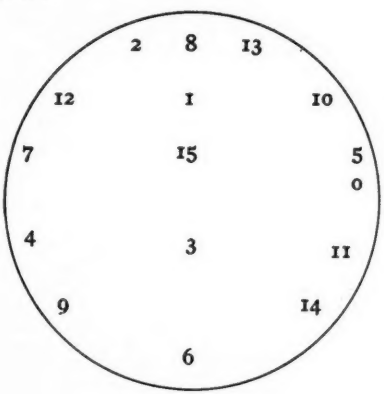
"Problems"

another trial. In subsequent speed exercises pupils who do not work rapidly enough to stand among the first still have the satisfaction of improving their record by decreasing the time required to do the work.

Following the counting for becoming familiar with the number spaces 1–100 should come counting by 2's, 3's, 4's, etc., within the first two groups of ten, as an aid in learning the combinations. For example, the pupil counts by 4:

beginning with zero:	0, 4, 8, 12	in reverse order:	12, 8, 4, 0
1:	1, 5, 9, 13		13, 9, 5, 1
2:	2, 6, 10, 14		14, 10, 6, 2
3:	3, 7, 11, 15		15, 11, 7, 3

At first the pupil uses Tables I and II if necessary. Soon he has the series memorized so that he can speak the numbers rapidly. To test his ability to use the series in adding and subtracting make a drill device as in the circle below.



Use clear, black figures at least $1\frac{1}{2}$ inches high, cut from a wall calendar. Paste them in mixed order upon a piece of bogus paper 12×18 inches. The pupil, with a pointer, adds and subtracts numbers as directed. If the requirement is to add 4 to each number in the circle and the pupil cannot at once speak the sum of 8 and 4, he drops back to the series 0, 4, 8, 12 and gives the sum, "8 plus 4 equal 12." If his difficulty is in subtracting 4 from 11, he repeats the series 3, 7, 11—11, 7, 3, and states, "11 minus 4 equals 7." As rapidly as they become able to do so, pupils are expected to give sums and differences in this drill exercise without naming the numbers which make up the combinations.

Table V gives further drill in addition and subtraction. Sometimes the pupils read the problems, as 4 plus 3 equal 7; at other times they simply name the sums and differences. The purpose

TABLE V

ADDITION

Read sign + plus. Read 0, zero.

4	1	5	2	3	4	7	0	2	0	5	7
+3	2	4	7	2	0	1	5	4	8	5	3
4	9	2	6	4	0	3	6	1	6	3	9
+2	1	0	1	5	0	4	3	5	2	6	0
8	6	5	3	9	4	2	4	8	7	6	9
+3	9	2	7	7	1	2	7	5	4	0	9
3	0	6	7	8	9	0	7	10	8	6	8
+9	10	4	5	6	2	11	8	4	9	5	7
9	5	8	9	7	9	6	3	0	7	4	5
+8	6	7	3	7	6	7	5	7	6	7	8

SUBTRACTION

Read sign − minus. Read 0, zero.

6	7	8	4	5	7	9	11	2	12	8	6
−2	5	1	2	0	3	2	5	0	5	3	3
11	8	3	13	14	9	7	12	4	18	10	3
− 2	5	0	5	7	4	3	6	1	9	7	2
15	9	7	13	10	8	12	9	1	16	7	4
− 7	3	1	7	5	4	5	6	0	8	2	0
12	9	7	17	15	7	11	13	15	14	12	9
− 7	5	0	9	8	6	6	8	6	6	2	0
10	11	9	5	17	15	10	14	9	11	8	14
− 2	4	1	1	8	9	3	4	7	7	0	9

of this work is to make pupils able to recognize the primary combinations instantly, and to speak or to write them instantly. The use of perception cards ($3 \times 5\frac{1}{2}$ inches on which each figure is at

least an inch and a half high) is valuable. The teacher exposes the card an instant; the pupil gives the sum or difference as

PERCEPTION CARD

directed. If he misses, he takes the card and reports the combination correctly when he hands it back at the close of the

recitation. By shifting the perception cards the teacher makes sure that the pupils are able to recognize the combinations in any order.

TABLE VI

DOUBLES OF NUMBERS

Read signs: + plus, − minus.
Learn doubles of numbers.

1	2	3	4	5	6	7	8	9	10	11	12
+1	2	3	4	5	6	7	8	9	10	11	12

Use doubles of numbers as a guide in addition and subtraction.
Read from top: as, 2 plus 3 equal 5.

2	2	2		3	3	3		4	4	4		5	5	5
+2	3	1		3	4	2		4	5	3		5	6	4
6	6	6		7	7	7		8	8	8		9	9	9
+6	7	5		7	8	6		8	9	7		9	10	8
10	10	10			11	11	11			12	12	12		
+10	11	9			11	12	10			12	13	11		

Read from top: as, 6 minus 4 equal 2.

2	3	4	4	4	5	6	6	6	7	8	8	8
−1	−3	−2	3	1	−5	−3	4	2	−7	−4	5	3
9	10	10	10	11	12	12	12	13	14	14	14	
−9	−5	6	4	−11	− 6	7	5	−13	−7	8	6	
15		16	16	16	17		18	18	18		19	
−15		− 8	9	7	−17		− 9	10	8		−19	
20	20	20		21	22	22	22		23	24	24	24
−10	11	9		−21	−11	12	10		−23	−12	13	11

Table III, column (1) presents the doubles of numbers below ten. They are easily learned in the forty-five primary sums of which they constitute one-fifth. The knowledge of these furnishes a guide in addition and subtraction. Table VI suggests the use of this knowledge in learning and recalling primary sums and differences. For instance, 8 plus 8 equal 16; 7 is 1 less than 8; hence 8 plus 7 equal 1 less than 16, or 15; 8 plus 8 equal 16; 9 is 1

more than 8; hence 8 plus 9 equal 1 more than 16, or 17. When the pupil has the idea of using the double of a number as a guide in addition or subtraction he is able to do it instantly without any formal explanation.

Counting by 10's is an easy form of adding or subtracting. Pupils often consider adding 9 difficult. This difficulty may be removed by using 10 as a guide in adding 9 as suggested in Table VII.

TABLE VII

ADDITION

Ten. It is easy to add ten to any number. Read lower number first: as 1 plus 10 equal 11.

10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
+1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Nine. 9 is 1 less than 10. The sum of 9 and any number is 1 less than the sum of 10 and that number. Use 10 as a guide in adding 9 to any number.

10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9
+2	2	+3	3	+4	4	+5	5	+6	6	+7	7	+8	8	+9	9		

TABLE VIII

TABLE OF TWO'S

1	2	3	4	5	6	7	8	9	10	11	12
2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
	4	2	2	2	2	2	2	2	2	2	2
		6	2	2	2	2	2	2	2	2	2
			8	2	2	2	2	2	2	2	2
				10	2	2	2	2	2	2	2
					12	2	2	2	2	2	2
						14	2	2	2	2	2
							16	2	2	2	2
								18	2	2	2
									20	2	2
										22	2
											24

In the counting by 2's from the number scales, Tables I and II, the equivalent of the multiplication table of two's has been

developed. These facts may be thrown into the form of Table VIII. Use this for both multiplication and division: 9 times 2 equal 18. How many 2's in 18? There are nine 2's in 18.

SUMMARY

Formal work in number usually begins in the second year.

At first the work must be concrete.

Strong visualization of symbols and of space relationships of numbers assists in the process of abstraction.

At the end of the second year, pupils should have a clear image of numbers from 1 to 100 in groups of ten, and the relationship of these numbers one to the other; and instant and automatic command of the primary sums and differences.

CAUSES OF THE SUCCESS OR THE FAILURE OF FIRST-YEAR BOYS IN A VOCATIONAL SCHOOL

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While the conclusions reached in this article are not based upon tables of statistics, formulated after an exhaustive survey of the work of the pupils under consideration, it may be said that the statements recorded here are authentic, as the facts were secured during a series of individual interviews with a large number of first-year boys, some of whom would be labeled "successful," while the others, if judged by ordinary standards, would be considered "failures."

These pupils were interviewed in an informal and friendly manner after a rather large amount of written evidence as to their earlier school standing, their physical condition, and their record in the Vocational School up to the date of the investigation had been very carefully studied. These three sets of school documents told a great deal of the life-story of each pupil. The grammar-school records gave something of his heredity, his home environment, and his physical, mental, and moral make-up. The record of the physical examination, made when he entered the Vocational School, was a most valuable help, and the written comments of the vocational teachers upon the work of each pupil in every academic subject and in all technical work completed a record which is probably as perfect as such records can be made.

A study of the cards recording the physical examination established the fact that the physical needs of the pupils had been well cared for in the primary and the grammar grades. There were almost no cases of neglected adenoids or tonsils, and the eyesight of the pupils had evidently received very careful attention.

From the individual comments of the vocational teachers it was comparatively easy to reach the conclusion that the entering

boys, numbering approximately one hundred, could be divided into three groups which might be appropriately designated as "successful," "doubtful," and "failures."

In the group labeled "successful" were the boys from the eighth grades of the Newton schools who had elected to enter the Vocational School, plus a considerable number from the corresponding grade of some of the adjacent towns and cities. These boys entered the school with a well-defined purpose and, in many cases, after a careful estimate as to the boy's probable success or failure in industrial work had been made by his grammar-school principal. Sometimes this estimate was based upon certain technical or so-called prevocational tests. That is, the boy had shown a special aptitude in printing or in some form of wood or metal work, or he had done some clever bit of work which pointed toward success in electrical or engineering lines.

This group of pupils, who were for the most part grammar-school graduates, presented comparatively few problems, and the experience of past years proves that they form a large percentage of the number completing the four years' course and in the natural order of events entering upon their life-work well equipped physically, mentally, and morally.

In searching for the causes of the success of these boys we are forced to the conclusion that of all the factors shaping a boy's life the most vital is the kind of ideas and ideals which are habitually presented in his home. Poverty, anxiety, sickness, and even tragedy, may be there, but if the father or the mother, or both of them, is strong morally and alert mentally, if the parents possess a fund of valuable ideas, if their ideals are high, if, even in the absence of what is commonly called education, there is sensible, intelligent conversation, high aims in regard to conduct and work, and an absence of silly, cheap, frivolous talk and conduct in the home, the viewpoint of the boy in regard to life and work is almost always right; and if he possesses good health and receives skilful training and good advice in school, his success in his chosen vocation is almost assured.

A second vital element of success is a good school organization—one in which the work is so systematized that every pupil has not

only skilful, expert instructors, but also an adviser, to whom he turns in a perfectly natural manner for any advice that he may need. This adviser must, of course, be in close touch with the pupil's home, but he must be very much more expert in diagnosing the boy's mental difficulties and in adjusting them than is the average parent. In fact, the public has the right to demand that this type of teacher—an expert in the reading of character and in estimating mentality, and a broad-minded humanitarian, who is also very familiar with conditions in industry—shall be found in every vocational school. There is necessarily a very large amount of readjustment in any well-conducted school of this kind. It is impossible to decide, until he has made a trial of the work, whether John Smith will succeed in the cabinet-making department, and oftentimes his prolonged stay in that work is one of vexation to his teacher and to himself and a costly economic error. The investigations of a competent adviser, a frank talk with the boy and his parents by a person who is alert to all the boy's possibilities, would result in John's trying another kind of work in which he would probably be more successful.

In selecting these advisers great care should be taken that they are of the type that can read character. Many very skilful instructors have little insight into mental processes, and such persons, while doing very important work as instructors, should not be placed on the list of pupils' advisers.

The pupils in the group being considered had no formally designated advisers, but it was evident that many of them had been strongly influenced by the advice of some instructor to whom they had instinctively turned in their time of need. A carefully selected group of advisers is ready now to meet the needs of these pupils.

A valuable adjunct to a stimulating home environment and skilful instruction, training, and advice that meets individual needs at school is some social organization. The one that was evidently the most potent force in the lives of the boys under consideration was that of the Boy Scouts. As the year went on it was observed that there was a distinct development in manliness, resourcefulness, and the desire to co-operate in all ways for the

good of the entire school body on the part of the boys who were active members of this organization.

In the group of successful boys studied, their development in power of intelligent and forceful expression was especially noticed. This improvement was traced directly to the training in the presentation of oral themes in the English classes. The boys talked upon processes and work with which they were entirely familiar, and their oral themes were clothed in clear statements and forceful and appropriate language. The improvement in the spoken language of the first-year pupils was very marked. It was noticed also that a large percentage of the successful boys were readers, and from the cards in the small school library, and the reports of instructors who kept in circulation collections of books from the public library and a large number of periodicals supplied by the school, it was found that a considerable amount of intelligent reading and discussion of current events and of historical, biographical, and scientific reading was accomplished by these pupils.

In considering the pupils whose work must be regarded as unsatisfactory we find such individual reports as these: "*Report upon the shopwork of James Jones*—This boy is very heedless; does not follow directions; careless in the use of tools; shows no aptitude for technical work; very clumsy and seems confused and stupid." The record in regard to the same boy from his teacher in English is as follows: "This boy is easily interested in reading and has improved in ability to express his thoughts clearly." His instructor in mathematics says: "James Jones is unable to make any progress in mathematics because of his lack of knowledge of the simplest processes." Another instructor reports: "This boy seems willing, but evidently fails to comprehend his work. He should be given the Binet test."

James Jones was called to the office, where an informal and sympathetic investigation brought out the following facts: The boy was the youngest of six children; he was fourteen years of age, but undersized, and his appearance would indicate that he was imperfectly nourished. It required considerable patience and diplomacy to draw from him any coherent statement as to conditions that would explain his failure to measure up to the standing

of the average boy of fourteen years. The story, as finally pieced together, was one familiar to every instructor who conducts similar investigations: a crowded home, poverty, some minor sicknesses resulting in a slipping-back in the school grades, no mental stimulus at home or specially skilful help at school, and the Vocational School opportunities seized upon by the grammar-school principal as a possible solution of the difficulty. Therefore, without a careful examination of the boy to determine whether he gave any signs of probable ability in technical lines of work, he had been sent to the Vocational School.

In a great many cases, as in the one described above, the method of procedure fails to achieve the hoped-for results. In this instance the boy showed no aptitude for tools or technical work and exhibited many evidences of confusion of mind and clumsiness in handwork in all the shopwork attempted. The result is that in too many cases boys of this type leave the Vocational School at the earliest opportunity, drifting into any occupation to which they can turn their hand. It would have been better in the case of such a boy as the one described—a boy who evidently had no aptitude whatever for technical work—if he had been kept in the grammar school until he had finished the grammar-school course. Such talents as he had were in the line of academic, rather than technical, tasks. With special help and advice in the grammar school he might possibly have entered in time the regular high school and taken a general or a business course, from which, under specially favorable conditions, he could have entered upon work as a clerk or an office boy. In the absence of favoring conditions he would have become one of the "hewers of wood and drawers of water," of which, fortunately, the world always stands in need.

An interesting case which proves that the estimate of even a very competent instructor as to the latent talent of a pupil is not always correct, and that some actual tests of ability are necessary, was proved in the case of a boy whom we will call Tom Brown. Tom's academic record was passable, but his shop teacher pronounced him hopelessly stupid in the handling of tools. The director sent for Tom, and after a brief conversation told the boy to watch his movements for a few moments. The director then

took apart a complicated tool and turning to the boy he requested him to put it together again. This he did promptly and accurately. He was then asked to observe the separation into its parts of a still more complicated tool, and he succeeded in uniting these parts into a perfect whole. It was evident that the boy had a keen eye, deftness of touch, and that he was of the motor-minded type of pupil. A determined but sympathetic probing followed, and the causes of his failure to do good work in the shop were found to be due to the stubbornness of undisciplined and ignorant youth and to a lack of understanding as to the importance of individual work. He was sent back to the shops after his instructor had been thoroughly informed as to the facts in the case, and finished the year's work successfully and will return with the prospect of taking the other three years of training.

After a very careful investigation of the "failures" among the first-year boys—an investigation in which several boys were given the Binet test by an expert in mental hygiene—we reached the conclusion that by far the greatest percentage of failures is among a group of boys who were sent in from the fifth and sixth grades of the grammar school. These were lads of fourteen years who for various reasons had lagged behind their mates and given indications of dropping out of school at the first opportunity. Some of these low-grade pupils respond to the stimuli of the vocational shop and academic training and are doubtless saved by that training to lives of useful service. A certain percentage of these young lads are, however, misplaced when they are sent to the Vocational School, and this misplacement, as has been said, is a costly economic error: the time of expert instructors, the use of costly machinery and tools, in fact, the whole school organization, is diverted in a large degree from the possible and satisfactory tasks of training boys who could become skilful workers and leaders in the industrial world to the impossible one of training boys without any aptitude for technical work.

The facts in the case seem to be these: In some grammar schools fourteen-year-old boys of the type commonly called low grade are given the most careful attention by their instructors and principals. Certain mental tests are given them, and a series

of technical tasks are presented which demonstrate sufficiently the fact as to the boy's motor-mindedness or the reverse. Sometimes these careful tests prove that the boy is not of the type that could be most successfully stimulated by the work of a vocational school. He has no great talent or capacity of any kind, but such gifts as he has are all in the direction that can best be reached by well-planned special instruction in the regular channels of grammar-school work. When this is the case, it is a serious error to transfer him to the Vocational School, where, confused and discouraged by the demands of shopwork for which he has no capacity and academic work for which he is imperfectly prepared, he becomes completely discouraged and drops out of school.

If we were to summarize the causes of failure in a vocational school we might say that they are:

a) An unfortunate heredity which manifests itself in weak or confused mentality or in an enfeebled physical condition.

b) A lack of mental stimulus in the home.

c) A gradual dropping below in the grades due to frequent absences caused by minor illnesses.

d) A lack of special help and advice from any person competent to give it.

e) Entering a vocational school without having received any special tests that would prove the boy's fitness for that line of work.

f) Attempting some line of vocational work for which the pupil has no aptitude.

g) The personal habits of the pupil. A comparatively small percentage of cigarette smokers was found among the "failures."

If we sum up the causes of the success of our first-year boys, we shall find:

a) A stimulating personality in the home, either father or mother or both.

b) Good advice and a skilful method of examination in the grammar school with a view to placing each boy sent on where he could profit best by the instruction.

c) Good health.

d) A well-organized vocational school.

e) Excellent instruction and skilful training in the vocational work attempted.

f) The elimination of persons of very limited education and of narrow mental vision from the corps of shop instructors.

g) The influence of a sympathetic school adviser—a person of insight into character and one who is in close touch with actual conditions in industry.

h) The influence of some social organization such as the Boy Scouts.

i) A series of school "talks" in which questions affecting the future welfare of the pupil are discussed by experts.

In conclusion, we would say that the improvement in physique, manners, mentality, resourcefulness, self-control, and power of expression of the boys who performed successfully the tasks attempted was so great as to make one very hopeful as to the future of these boys and also as to the work of the Vocational School in giving its pupils the training that will make them worthy citizens of their state and country.

THE GROWTH OF CITIES AND THEIR INDEBTEDNESS FOR SCHOOLS

EARLE CLARK
Statistician of the Russell Sage Foundation

The Division of Statistics of the Russell Sage Foundation is engaged in a study of the indebtedness of American city school systems. In the course of the study evidence has been secured as to the relationship between school debts and the rate at which cities are increasing in population. This evidence will be summarized and analyzed in the present article.

The rapidity of a city's growth is often put forward as a reason for increasing its school debt or as an explanation of a large indebtedness already existing. It is asserted that the extensive building operations made necessary by a large increase in school population usually cannot be paid for from current revenue. The validity of this reasoning may be tested by an examination of the statistics. An attempt has therefore been made to answer the question: Is indebtedness largest, in general, in the cities which have grown most rapidly in population, and smallest in those which have grown least rapidly?

Statistics as to the indebtedness of cities of 30,000 or more population are found in the census report "Financial Statistics of Cities" for 1915, while the census for 1910 gives information as to the rates of increase of the population of these cities from 1900 to 1910.[1] As the cities differ widely in size and in wealth, total indebtedness is not significant for the purposes of the present study. It is necessary, in order to obtain comparable figures, to state indebtedness in terms of the burden which it imposes upon ability to pay taxes, and this has been done by computing for the different cities indebtedness per inhabitant.

[1] No attempt has been made to show movement of population subsequent to 1910, for the reason that all population figures for more recent years are estimates based on the returns of the censuses of 1910 and 1900.

The distribution of these cities according to indebtedness per inhabitant is shown in Fig. 1. The range of the distribution extends from nothing up to between $30.00 and $35.00. The average indebtedness per inhabitant is $9.72, and the standard deviation, computed from the average, is $6.60, or 68 per cent of the average. It will be noted that the distribution is skewed—that the cities cluster at the lower end of the scale.

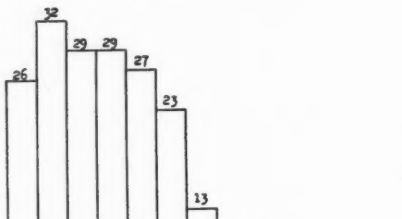

FIG. 1.—Distribution of 204 cities according to school indebtedness per inhabitant. Each column represents a group of cities. All the cities in the left-hand column have per capita school debts of less than $2.50; the city in the right-hand column has indebtedness of between $30.00 and $32.50. The heights of the columns are proportionate to the number of cities represented.

In Fig. 2, which, like Fig. 1, is based upon per capita indebtedness, the names of the cities are given. The cities are arranged in columns. All the cities in the left-hand column owe less than $5.00 per inhabitant, and the city in the column at the extreme right owes between $30.00 and $35.00. In each column the cities are arranged from top to bottom in descending order of indebtedness; Chester, for example, at the head of the second column, has a much larger per capita indebtedness than East St. Louis, at the foot of the same column. By means of this diagram a reader interested in any given city can compare its indebtedness with that of any other city, and can ascertain its position in the group.

Fig. 3 shows the distribution of the cities according to rate of increase in population from 1900 to 1910. The curiously distorted appearance of this diagram is mainly due to the large increase

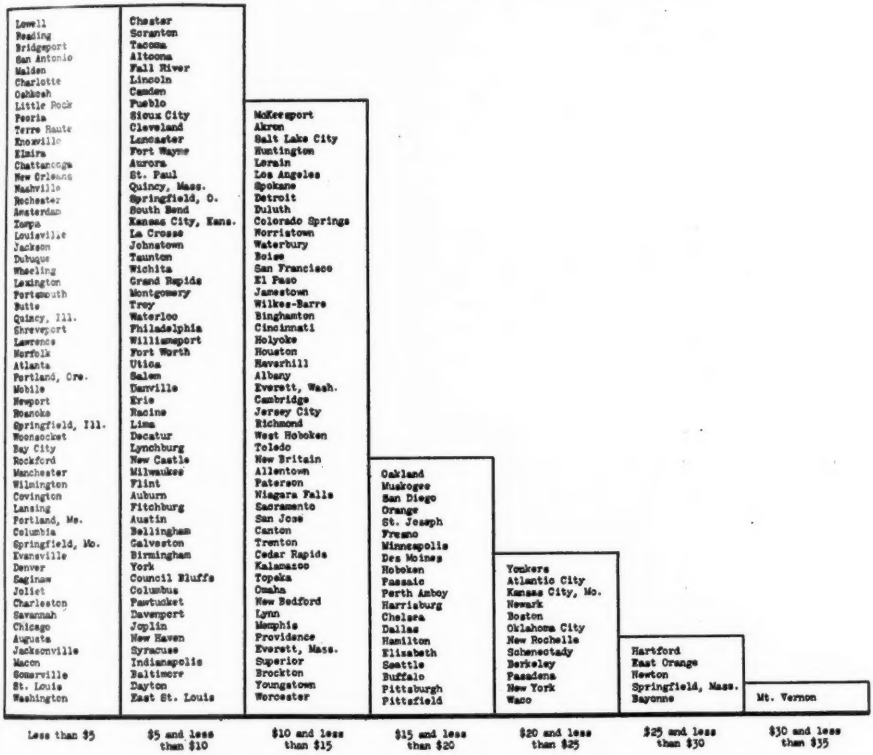

FIG. 2.—Distribution of 204 cities according to indebtedness, with names of cities. In each column the cities are arranged in descending order of indebtedness per inhabitant; the city appearing at the top of the column has a larger indebtedness than that at the bottom.

reported for two cities—Oklahoma City and Muskogee, Oklahoma. The average rate of increase is 54.9 per cent, and the standard deviation, computed from the average, is 65.7 per cent. It will be noted that the standard deviation is greater than the average.

This is due, in part, to the fact that the populations of several cities decreased.

Indebtedness per inhabitant has been related to the rate of increase in population by computing a Pearsonian coefficient of

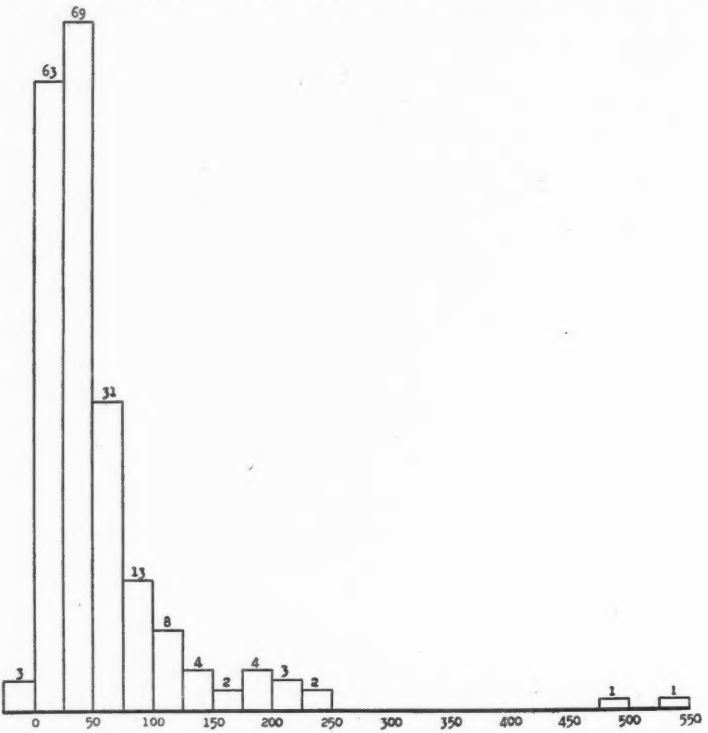

FIG. 3.—Distribution of 204 cities according to percentage of increase or decrease in population from 1900 to 1910. Each column represents a group of cities. All the cities in the left-hand column decreased in population by less than 25 per cent; those in the second column increased by less than 25 per cent; and the city in the column at the extreme right increased by between 525 per cent and 550 per cent. The heights of the columns are proportionate to the number of cities represented.

correlation. The result obtained is +0.26. The reliability of this coefficient is affected by the number of cities included in the comparison. This factor has been taken into account by computing

the probable error of the coefficient, which is found to be 0.044. Computations based upon the probable error and the coefficient indicate that the chances are even that the true coefficient lies between +0.21 and +0.30, and a further computation shows that the chances are more than two to one that it does not fall below +0.19 nor exceed +0.32. There is, then, a slight positive correlation between indebtedness and rapidity of growth.

It is clear that the cities that have grown most rapidly have, in general, a larger indebtedness than the cities that have grown less rapidly, but that the relationship is not at all close.

The evidence presented in this article bears directly upon the validity of the theory that rapid growth is a reason and an excuse for large school indebtedness. While the statistics show that the more rapid advances in population are accompanied, rather more frequently than not, by large debts, the correspondence is seen to be slight. This means that very many cities have grown rapidly without having been forced to incur debts of exceptional magnitude. And if such a result is possible for many cities, it is doubtless possible for others. Rapidity of growth is not, then, an unanswerable argument for an increase in indebtedness. The policy to be adopted in any individual case must depend upon whether the community is willing to make necessary expenditures from current revenues in order to avoid imposing a burden of indebtedness upon future taxpayers.

EDUCATIONAL WRITINGS

I. A SUMMARY OF RECENT TEXTBOOKS IN ELEMENTARY-SCHOOL READING AND WRITING

A. BASIC AND SUPPLEMENTARY READING-BOOKS, 1916–17

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University of Chicago

During the last few years numerous basic and supplementary readers have been published in response to the demand for a larger amount of interesting and appropriate reading-material for pupils of all grades. It is the purpose of the following paragraphs to describe briefly the essential characteristics of the readers which have been received by the *Elementary School Journal* for review during 1916–17.

PRIMERS

It is generally agreed that beginning reading presents a twofold problem: in the first place, pupils must learn to secure the meaning of what they read; and in the second place, they must develop independence in the recognition of sentences and words. A primer may be organized primarily to center attention on the content of what is read or it may be organized to aid a pupil in securing a reading vocabulary. In the first case the primer is adapted for use in an interesting and profitable reading exercise. In the second case the primer lends itself to the purposes of a drill exercise and should not be thought of as a reader. The four primers which are mentioned below will be discussed largely from the point of view just presented.

The *Kewpie Primer*[1] contains a continuous story about the Kewpies, with whom most pupils are more or less familiar. Inasmuch as the pupils will read the stories with keen interest this primer may be classed as a content reader. The story of the Kewpies has been told in simple, familiar words and it avoids the monotonous repetition which characterizes many primers. Independence is developed to a limited extent through word-building. In general, however, progress is based on the child's desire to find out what is related on the page. In order to secure rapid progress the reading lessons of the primer should be supplemented by drill exercises to develop power in word-analysis.

The *New Barnes Primer*[2] assumes that reading is a thought-getting process. The first few lessons attempt to develop a basic vocabulary by means of

[1] *Kewpie Primer*. By Rose O'Neil. New York: Frederick A. Stokes Co., 1916.

[2] *New Barnes Primer*. By May Robbins, Herman Dressel, and E. U. Graff. New York and Chicago: A. S. Barnes Co., 1916.

exercises involving a large amount of repetition. Beyond the first ten pages the lessons are based on interesting, familiar stories such as "The Three Bears," "The Three Little Pigs," etc. The distinctive feature of the *New Barnes Primer* is that silent reading is emphasized from the beginning in order to train pupils to secure the meaning of what is read. The manual provides definite suggestions for training in word-analysis during drill periods.

A third primer, entitled *Bob and Betty at Home*,[1] aims to give the child a body of interesting material. Subject-matter is selected from among the common experiences in home life, supplemented with related plays, jingles, and rhymes. Ability to organize words at sight is developed through repetition, memorization, word and sentence games, and dramatization. At frequent intervals throughout the book interesting content has been sacrificed to provide vocabulary opportunities. In endeavoring to combine the essential characteristics of a reader and a drill book in one volume essential features of each have been necessarily omitted.

The aim of the new Sloan readers[2] "is to give the child in the most direct way and in the shortest time the independent power to read." The primer contains many short selections which aim primarily to introduce the pupil incidently to the simpler phonetic elements. The book is not a success from the standpoint of content, because many of the selections are unnatural and uninteresting. Its value as a drill book may be questioned, inasmuch as the elements of words are presented in a very incidental way and are not made the object of specific study.

BASIC AND SUPPLEMENTARY READERS IN THE PRIMARY GRADES

Reading exercises in the second and third grades should give the pupil an opportunity to read a large amount of interesting material from which he will gain both information and pleasure. On the technique side reading exercises should afford abundant opportunity for the permanent establishment of those habits and associations upon which effective reading depends.

The *Beacon Introductory Second Reader*[3] contains twenty stories, each about seven pages in length. In general the stories are very interesting. They are simply told and each contains the old folk-lore element. In order to develop power in the recognition of words the selections have been carefully graded from a phonetic point of view. The manual contains valuable suggestions for drill exercises in word-analysis.

The *Sloan Second Reader*[4] seeks to develop power in reading for thought. The book contains a large number of short prose and poetic selections which

[1] *Bob and Betty at Home (a Primer)*. By Katherine E. Dopp. Chicago and New York: Rand McNally Co., 1917.

[2] *New Sloan Primer*. By Katherine E. Sloan. New York: Macmillan, 1916.

[3] *Beacon Introductory Second Reader*. By James H. Fassett. Chicago: Ginn & Co., 1916.

[4] *Sloan Second Reader*. By Katherine E. Sloan. New York: Macmillan, 1916.

offer opportunities in expressive reading. Through extended practice in resolving words into their natural units, and through frequent, systematic exercises in syllabication and in the pronunciation of words, phrases, and sentences, the author endeavors to establish the basis for thought-reading. By concentrating so much attention to the form side of reading during reading exercises, it is probable that the pupil will lose sight of some of the larger results which should be secured.

The chief feature of the third reader of the *Ideal Catholic Reader*[1] is its religious atmosphere. Many of the selections are chosen from biblical narratives taken from the Old and New Testaments, from interesting accounts of the child-saints of the church, from stories inculcating the fundamental virtues which go to make up good citizenship, from lessons on patriotism, etc. Most of the stories are very short and are better adapted for expressive reading than for quantitative reading. Although children should read practically all the stories which are included in the reader, the advisability of limiting the selections of a basic reader for the public schools to those of a religious type is questioned.

A number of supplementary readers for the second, third, and fourth grades will be reviewed very briefly. *A Child's Robinson Crusoe*[2] represents a successful adaptation of this familiar story to the interests and reading capacities of second-grade pupils. The *Outdoor Book*[3] is a nature-reader for the second grade and aims to promote the interest of the pupils in nature. It contains twenty-five narrative and descriptive selections which are free from difficult words. The *Cave Twins*[4] includes an account of prehistoric man, and the vocabulary is simple. The mechanical organization of the book is open to criticism. The book may be used effectively for quantitative sight-reading. *Jim and Peggy at Meadowbrook Farm*[5] is a content primer which emphasizes the fundamentals of farm life in terms which city children can understand. The book is adapted to the reading capacities of third- and fourth-grade children. The type is somewhat small and the lines are too close together for easy reading. *A City Reader for the Fourth Grade*[6] aims to present selections which are within the limits of the city child's experience. Although several selections are based on modern city situations, the author has depended for a large part of

[1] *Ideal Catholic Reader.* By a Sister of St. Joseph. New York: Macmillan, 1916.

[2] *A Child's Robinson Crusoe.* By W. L. and S. H. Nida. Chicago: Beckley-Cardy Co., 1916.

[3] *Outdoor Book.* By Zoe Meyer. Boston: Little, Brown & Co., 1917.

[4] *Cave Twins.* By Lucy Fitch Perkins. Boston and New York: Houghton Mifflin Co., 1916.

[5] *Jim and Peggy at Meadowbrook Farm.* By W. C. O'Kane. New York: Macmillan, 1917.

[6] *A City Reader for the Fourth Grade.* By Abbie Porter Leland. New York and Chicago: Charles E. Merrill Co., 1916.

the material on classical selections and references such as "Sons of Rubens," "Infanta Margarita," "Alexander, a Hero of War," etc. Hence the practical character of the selections which one is led to expect from the title is not fully realized.

BASIC AND SUPPLEMENTARY READERS FOR THE INTERMEDIATE AND GRAMMAR GRADES

By the end of the third grade the pupil of average ability has made sufficient progress in reading to enable him to proceed independently. He becomes interested in finding out things for himself, and he substitutes silent reading for oral expression. Furthermore, ability to make critical interpretations depends to a large extent on the breadth of experience which the pupil has encountered. Inasmuch as pupils receive their knowledge of the world at large primarily through reading, the intermediate and grammar grades represent a period during which pupils should read extensively along numerous lines of interest and information. The readers which are reviewed in the following paragraphs differ widely from this point of view. Some of the readers aim to introduce the pupil to interesting and varied experiences, while other readers aim to acquaint the pupil with the world's best literature.

The third and fourth readers of the Horace Mann series[1] contain selections covering a wide field of interest and information. The third reader contains stories and tales from various countries of the world, including folk-tales, fables, fairy stories, and youthful adventure. The fourth reader aims to "reveal and interpret the world as it opens to eager and wondering eyes of boys and girls of ten or twelve years." Stories of famous Americans, folk-tales, and classic stories from Europe and the Orient are included. The vocabulary is simple, and many long selections adapted to the purposes of silent-reading exercises are included.

The fourth, fifth, and sixth books of the *Merrill Readers*[2] contain simple selections in order that the pupil may read and understand without encountering too many difficulties. Selections of varying length are included to provide opportunity for various types of oral- and silent-reading exercises. The fourth reader contains many abridged selections of masterpieces in literature which the authors believe every child should know. Although large emphasis on literary selections is questionable in the fourth grade, it must be admitted that the authors have shown a great deal of skill in adapting these selections to the interests and reading capacities of fourth-grade pupils. The fifth reader contains a large amount of wholesome adventure and experience including

[1] *Horace Mann Readers*. By Walter L. Hervey and Melvin Hix. New York and Chicago: Longmans, Green, & Co. *Introductory Third Reader*, 1916; *Introductory Fourth Reader*, 1917.

[2] *Merrill Readers*. By F. D. Dyer and Mary J. Beady. New York and Chicago: Charles E. Merrill Co., 1916.

some of the famous stories of the world's literature from the great writers. It is the purpose of the book to lead pupils to enjoy good art, great characters, and wholesome romance. The sixth reader contains selections of considerable length which can be used effectively in silent-reading exercises. There are included also numerous short selections which may be used in oral-reading exercises.

Every-day Classics[1] "has been prepared in the belief that the instruction in reading in the schools should be based on a selection of the classic in our literature. The pupil is introduced, not only to what is excellent in itself, but to what his father and mother have read before him, and to what has become a valued part of the heritage of the nation and of the race. All other school reading should be supplementary to this study of what is best in literature." The third reader is made up largely of folk-literature, fables, fairy stories, simple poetry, etc. The fourth reader is made up of fanciful tales of adventure, stories about real heroes, descriptions of outdoor life, stories about children and their adventures, and patriotic selections. The fifth reader contains stories of adventure and wonder, and the sixth reader is a book of world-famous stories. It cannot be questioned that the books contain a body of literature with which the pupils should be familiar. The basic contention of the series, however, that all school reading should center about the classic in literature is questionable.

The "King's Highway Series"[2] embodies a graded system of elementary moral and religious training, primarily for the home and private school, but designed also for use in public schools. There are eight books in the series containing subject-matter relating to the virtues and vices peculiar to children of various school grades. Each book contains a particular title, as, *The Way of the Gate*, *The Way of the Green Pasture*, *The Way of the Hills*, etc. The series is organized on the theory that moral lessons can be taught most effectively through the indirect-story method. The outline of virtues and vices was determined by means of a questionnaire circulated among the grade teachers of the public schools of ten cities, and by means of a careful study of the moral and religious evolution of the child in the light of psychology. Many stories are included in this series which are found in other readers in current use. A direct attempt has been made in the case of most selections to emphasize the moral and religious lessons involved. Some of the stories represent the results of generalized experience with regard to moral and religious issues, and cannot be fully appreciated by pupils of the elementary school.

The *Story and Play Readers*[3] have been organized in three volumes for the sixth, seventh, and eighth grades. The series is built on the theory that "no

[1] *Every-day Classics*. By F. T. Baker and A. H. Thorndike. New York: Macmillan, 1917.

[2] "King's Highway Series." By E. H. Sneath, George Hodges, and H. H. Tweedy. New York: Macmillan, 1916.

[3] *Story and Play Readers*. By Anna L. Lütkenhaus. New York: Century Co., 1917.

matter what effect a fine bit of literature has upon the child mind at the time of reading, there is little or no lasting impression made unless there is opportunity for expression." In harmony with this theory a large number of selections such as "A Man without a Country," "The Talisman," "The Birds of Killingworth," have been written wholly or in part in dramatic form. The dramatic instincts of pupils can doubtless be utilized to advantage in connection with the study of many selections. A question arises in this connection concerning the relative advantages, on the one hand, of placing the material in final form in the pupils' hands and, on the other hand, of permitting the pupils to reorganize selections for dramatic purposes.

B. REVIEW OF RECENT TEXTS IN PENMANSHIP

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University of Chicago

A departure from the prevailing methods of teaching writing is represented in the *Graded Writing Textbooks* by Albert W. Clark.[1] The distinguishing feature of this method is that it recognizes the two chief phases of the writing movement, namely, that by which the letters are produced and that by which the hand is carried along the line while the letters are being written. The exercises are designed particularly to promote the sideward movement of the hand. No direct attempt is made to develop directly the so-called muscular or arm movement, but the pupil is allowed to use whatever movement results in freedom. Furthermore, the exercises are not formal drills, such as the oval and straight-line movements, but consist in the writing of letters or words. The method consists of a series of copy-books containing elaborate instructions to the teacher with each copy. There is considerable waste of space in thus printing the directions to the teacher on the pages with the pupil's copies. Another feature which is emphasized is the attempt to correlate writing with the other subjects by introducing examples of business practice, facts with regard to personal hygiene, and other subjects. The correlation of writing with the other subjects is highly necessary, but it is questionable whether this is the best means of bringing it about. The time which the pupil spends in learning other things he is not spending in the technique of writing, and the organization of such matter had probably best be left to the other subjects. This implies, however, that some attention shall be given to writing by other than the writing teachers. On the whole, the method is a very interesting departure.

[1] *Graded Writing Textbooks.* By Albert W. Clark. Boston: Ginn & Co., 1916. See also *The Fault and Remedy in School Writing.* "A brief manual explaining with illustrations the principles of the method."

The Kirby method[1] has been reviewed in a recent number of this *Journal*. The distinguishing feature of this method is that it requires that the letters themselves shall be written to a definite count, as well as the formal exercises. Different letters and combinations of letters are designated to be written by two-part, three-part, or four-part time. The exact place on the letters where the count should come is not indicated, but the division of the strokes is fairly evident from the illustrations which are given. The book is a manual for teachers, but it contains numerous exercises and a completely organized course. In connection with it copy pads for pupils' use are published. The definite, detailed application of rhythm is a departure which is undoubtedly calculated to have considerable influence on methods of teaching writing.

In connection with the economy method of writing, which is a revision of the economy system, a manual by Elmer G. Miller has been published.[2] This manual also indicates the count at which the various letters are to be made, but confines the counting to the separate letters and does not incorporate it into the exercises. Some relaxation of the rigid arm-movement method is permitted by allowing the arm to slide on the desk in the first and second grades. Accompanying this is the use of large letters. The formal exercises, both on the blackboard and at the seat, are taught by means of rhymes and songs. The method continues the customary procedure of placing large emphasis upon these formal drills. Considerable discussion is given to the matter of the pupil's analysis of the faults of his own writing, and a detailed comparison of his writing with the copy. This is a progressive feature of the method. Another feature is the adoption of the modern device of grading writing by systematized scales. It is interesting to notice that such scientific methods as these are gradually being adopted by practical supervisors of penmanship.

Another teachers' manual, which is the outgrowth of a co-operative study by supervisors, principals, and teachers with the penmanship supervisor, has been published by H. E. Walker, of St. Louis.[3] The method incorporates seven principles and rules which were agreed upon by the conference already alluded to. These principles include blackboard writing in the first grade, the use of words rather than exercises in this beginning writing, the relative emphasis upon form at the beginning, and the requirement of only a moderate speed, which increases gradually from grade to grade, the systematic instruction in such elements of form of movement as body-posture, pencil-holding, and so on. The permission of finger movement through the second grade and the introduction of arm movement at the third grade and pen and ink at the fourth grade are among the more progressive features. Other features which may be noted

[1] *Penmanship, the Kirby Rhythmic Method.* By J. Albert Kirby. New York: Newson & Co., 1916.

[2] *How to Teach Writing. Manual for Teachers of the Economy Method of Writing.* By Elmer G. Miller. Chicago: Laurel Book Co., 1917.

[3] *The Walker Method of Functional Writing.* By H. E. Walker. St. Louis, 1917.

are the classification of pupils within a grade according to their proficiency and the detailed analysis of each of the letters to indicate their construction. In this analysis, however, the letters are not classified according to the movement by which they are made, but are taken alphabetically.

A somewhat fuller and more systematic discussion than is to be found in the ordinary manual is represented in the book by Lister.[1] This manual is to accompany the books of copies which are put in the hands of the pupils. The various phases of the teaching process, such as position, movement, and method of teaching the letter, the word, and the sentence, are discussed systematically. A very complete and thorough discussion of the faults which are characteristic is given, accompanied by illustrations. The method, however, does not present anything novel in the way of movement or drill.

II. COMMENT ON CURRENT EDUCATIONAL WRITINGS

1. *A new scale for grading handwriting.*[2]—Ever since the first handwriting scale was published, the most widely used handwriting scales have been criticized because they measure only the form, quality, or legibility of the writing and not its speed or the manner in which it is produced. The present scale[3] attempts in the fullest manner of any yet published to incorporate in the scale itself the results of observations on speed, posture, and movement. The demand for the inclusion of these elements in the scale itself rests upon a misapprehension. A writing scale is a series of specimens which should represent equal or approximately equal steps in some characteristic or characteristics which may be observed in the writing itself. When characteristics are included in the rating of the specimens in the scale which are based on observation of other qualities than those in the writing itself, we do not have a true scale. The series of specimens, in other words, cannot be used as a scale because the elements upon which the judgment is based do not appear in the specimens, but have to be observed independent of the scale itself. The scale is not at all adapted to an accurate or scientific measure of either the writing product or the manner in which it is produced. Furthermore, the scale which is before us includes an evident piece of propagandism. At the bottom of the chart for each grade is a specimen which is denominated "Finger Movement Writing." This specimen in each case gets a low score, because it is rated in each case almost down to zero in the element of speed, and zero in posture and movement. In other words, this part of the scale implies, with no evidence at all to support

[1] *Muscular Movement Writing Manual.* By C. C. Lister. New York: Macmillan, 1915.

[2] Review contributed by Dr. F. N. Freeman, University of Chicago.

[3] *Standards for the Evaluation of Efficiency in Palmer Method Handwriting.* By A. N. Palmer. New York: The A. N. Palmer Co.

it, that finger-movement writing is necessarily very poor in speed and posture. The movement is rated zero on the arbitrary definition of what a good movement is. No evidence either of the value of arm movement or the relation of arm movement and speed and posture is presented. There is, on the contrary, scientific evidence that finger-movement writing may be and usually is as rapid as arm-movement writing.

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2. *A volume for teachers on educational psychology.*—The editor's introduction to Professor Freeman's *How Children Learn*[1] is such a clear description and evaluation of his second book on learning that we print it in full herewith:

In an earlier number of this series of textbooks the author of the present volume presented the psychological principles underlying good teaching of the so-called common-school branches. Instruction in handwriting, drawing, reading, music, spelling, history, geography, mathematics, and the sciences was analyzed into types, and the lessons of psychology applied in a way to be of much help to the teacher of these subjects. In the present volume the author takes up the growth of the child's mind, and shows how good instruction in any subject and in all parts of the school system must be founded on certain general applications of psychology to the teaching process. In reading through the work here presented, it is interesting to note how fully all questions as to proper mental development of children are related to the psychology of the learning process.

The present volume is a valuable study in applied psychology. It concerns itself primarily with a study of the native and acquired responses of children, and the significance of these for educational development and for social control. It is the purpose of education to deal with these native responses of children, stimulating some and repressing others, and in addition to develop in children many acquired responses which will be valuable to them in later life. In the development of the idea that education means the training of the child to respond in ways which society has approved and men have found useful, the author analyzes the ways of responding which are both native and acquired with children, as these relate to their play, imitation of others, self-assertion, social attitudes, use of language, the acquirement of skills, perceptions, association and memorizing, and the thinking process. He then formulates the general principles of mental growth in children, devotes a chapter to a careful analysis of the much-debated question of the transfer of training, and concludes with a valuable chapter on mental economy and mental hygiene. In a sense the volume at hand is a textbook in educational psychology, revealing to teachers and students how all effective instruction of children must be founded on the utilization and development of the child's native and acquired responses to the stimuli of our civilization.

The book has been prepared for use as a textbook in colleges and normal schools, and for use as a reading-circle book with teachers. An effort has been made by the author to use as few technical terms as are consistent with a fair degree of precision of statement, and to make the statement of general or abstract principles understandable, by the use of illustrations from familiar experiences, to the reader who has not studied

[1] *How Children Learn.* By F. N. Freeman. Boston: Houghton Mifflin Co., 1917. Pp. xiv+317.

psychology. In particular, schoolroom situations have been used continually as the chief source of illustrations and applications. It is confidently believed that this new volume in the series will find for itself a large field of usefulness.

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3. *New kinds of school reports.*—School administrators are recognizing that it is incumbent upon them to devise more effective ways of acquainting the public with the carrying on of school work. In recent years it has been clearly evident that the traditional school report and annual compendium of technical and statistical material have been read by neither the educational nor the lay public. Stimulated by the recent reports of city-school surveys and especially by the advances in reporting educational facts which were marked out by Dr. Ayres in the Cleveland Survey monographs, a few progressive school superintendents have turned to the use of the *monographic school report.* The pioneer in this line was Superintendent F. E. Spalding, now of Cleveland, Ohio, who as superintendent in Minneapolis two years ago used the monographic report as a means of educating the public to the clear comprehension of school problems in that city. Oakland, California, under the superintendency of Mr. Barker and the efficiency investigations of Mr. Wilford Talbert, adopted the form suggested by the Minneapolis reports. The recent monographic reports of the Oakland Board of Education for the school year ending in June, 1917, contain material that will be suggestive primarily to school officials in other parts of the country. It illustrates a tendency on the part of school men to present educational facts so that the more intelligent citizen of the community can grasp them.

The most recent example of the use of the monographic method is found in the recently issued school monographs by H. O. Dietrich, superintendent of schools in Kane, Pennsylvania. Whereas the Minneapolis and Oakland reports, although published in a more comprehensible form as regards statistics and descriptive comment, are yet somewhat difficult of comprehension by the lay citizen, these reports of Superintendent Dietrich are in a class by themselves in clear presentation of the present status of instructional and administrative efficiency of the Kane schools. Three publications have been issued: (1) *Estimates or Positivism—Which?* (2) *The Child: Where Is He?* (3) *Education in Dollars and Cents.* The purpose of the Board of Education is stated as being "to publish a series of pamphlets, each one to give the definite and non-partisan information concerning some phase of school work." In the first report Superintendent Dietrich points out fundamental questions which will be discussed with the public and which will be attacked by the best scientific procedure that has been developed by school people, namely:

> Should efficiency of education be measured by (1) personal opinion, (2) traditional examinations, or (3) fixed units of a definite scale? What should be the degree of efficiency in reasoning? What should be the degree of speed and legibility after 4 years of class instruction in penmanship? What should be the efficiency in spelling

after 6 years of study? How much time should be given to the teaching of subjects? How much to the teachings of children? How shall we grade our pupils in a given class? Should children of one age be in the same class? Should children stay in one class for a year, or should the year be divided into steps, and the work so arranged that the pupil can work as rapidly as his ability permits? Can we show that pupils taught by one method do speedier and more accurate work than those taught by some other method?

The first pamphlet reports the results of measuring the achievements of the children in the Kane schools in spelling, in handwriting, and in the fundamentals of arithmetic by means of standard tests. The data and the conclusions are presented in such form as to be perfectly intelligible not only to the educational but to the lay public of the city. The second pamphlet gives a discussion of a study of the progress of children through the grades of the Kane schools. It is merely a 12-page pamphlet, the conclusions of which rest upon another 12-page statistical pamphlet called *Child Accounting for the Schools of Kane, Pa.* The statistics are presented in the form of an age and grade table, a progress and age grade table, a table which combines age and progress, a table of withdrawals by grades with cause, a table of attendance of children in periods of ten days, another with promotions, withdrawals, and non-promotions by grades and by schools, and finally promotions at the close of the year in high school. We quote some of the striking conclusions from the study as they are reported to the citizens of the community, since they illustrate the work that is being done in this progressive small city. Superintendents of schools will do well to follow Kane's example in making use of scientific technique and in recognizing the need of reporting the results of educational investigation in such form as to be clearly intelligible to the supporting lay public.

We are Finding the Child.

For out of the 434 pupils who had made slow progress we selected the ones who had lost two or more years. The Binet Test was given to 169 of these to test their mentality.

Out of these 169 there were 98 slow due to mental incapacity. These were organized into four "Opportunity Classes."

The remaining 56 were found to be ahead of their grade, due to mental capacity, and were given a chance to make up a grade in a six weeks' summer course.

Of these, 38 succeeded in making up an entire grade, 10 made up a half-grade, and 10 lost heart and dropped out before completion of the course.

These children all take a different attitude toward school work—it is happiness to them instead of drudgery.

We have arranged for three promotion periods of 12 weeks each so as to permit each child in the system to work and advance as rapidly as he is capable.

We have four teachers who are caring for the 98 pupils who were held back due to their lack of textbook knowledge, but who are otherwise normal.

We have discovered 23 children whose mental ages are all the way from one to seven and one-half years less than their physical ages.

4. *Two handbooks which give the technique of self-surveying for normal schools and colleges.*—School systems and higher educational institutions have for some years past exhibited the influence of the spirit of self-examination and educational stock-taking which is abroad in this country by committing themselves to the "survey" method. Three points were clearly recognized by the institutions and persons concerned: (1) that the first step in improvement of school efficiency must be the process of evaluating present conditions; (2) that this evaluation must first be carried on by persons trained in the procedure—namely, disinterested specialists from the universities, foundations, and bureaus; (3) that, that once done by such a group, the greatest good to the system or to the institution would come only through the setting up of a *continuing inventory* by the school system itself, which would employ methods of detailed comparative analysis. Necessarily the early surveys of school systems and institutions, having to blaze out a new type of technique in an unexplored field, were largely of the "blanket-inventory" type. Some were well done and resulted in great profit to the school systems in question, as witness the *year-long study of the Cleveland school system* by Dr. Ayres, of the Russell Sage Foundation. Others were hastily done by individuals relatively unequipped to do the task, and resulted in little permanent good to the school system.

At the suggestion of some of these surveyors, school systems more recently have been conducting continuing inventories, which study in detail particular school activities and by close co-operation of school officials and of outside specialists carry on continuous studies of methods of improving educational work. Such procedure is well illustrated by the work of Dr. H. L. Smith, Bloomington, Indiana, which was commented on in these columns last month.

It has been recognized for some time that there is now needed a critical but constructive method of analytical procedure which can be put in the hands of school people themselves to supplement the methods of surveying that have already been established. Active in the early days of the survey movement, especially as it related to the state and higher educational institutions, was Mr. W. H. Allen. In recent years he has been trying to short-cut the necessarily slow process of educating school officials to the advantages of the self-survey—the continuing inventory—which our early survey specialists hope to see come eventually. It has been recognized that one of the most expeditious ways of getting school and college men to do this is to put in their hands manuals of procedure for carrying it out—books which will give the entire technique of "self-survey"—even to the printing of complete lists of specific questions which should be asked concerning the status of each educational activity.

Mr. Allen has centered his attention on the normal schools and colleges. The results of his labors are compiled in two handbooks of self-survey technique,

one for normal schools[1] and one for colleges and universities.[2] These books are "case books" in educational analysis, planned primarily for the normal-school and college administrator, secondarily for teachers in these two types of institution and for interested laymen. The normal-school book is almost entirely based upon the Wisconsin State Normal School Survey, conducted in large by Superintendent A. N. Farmer. It discusses such questions as: the reasons for self-survey; the steps which are necessary in conducting a self-survey; making self-surveys build as they go. It reveals a distinctly hypercritical attitude on the part of the writers toward nearly all of the survey work that has been done by other persons. The book discusses problems of administration, course of study, supervision, classroom instruction, extra-curricula activities of students, the technique of reporting surveys. The college book leaves the discussion of specific technique of conducting a survey to the normal-school book, and devotes its attention to the detailed study of such problems as these: the survey movement in higher education (including another hypercritical discussion of "who shall make surveys"); procedure for the separate college survey; relation of trustees to president and faculty; the executive and business efficiency; faculty government; extra-curricula activities of students; the course of study; instructional efficiency; relation with college communities.

These books do not theorize. They leave construction of principles to the reader and suggest only the statement of specific facts. Illustrative cases are offered for various points made. The best available literature is pointed out in connection with the discussion of each activity. The statements with respect to the literature are not general, but specific—the material is evaluated in detail. Sample forms, charts, record blanks, are given. Quotations are made of the procedure of progressive institutions with respect to each activity. The college book gives a résumé of progressive practice in at least fifty colleges and universities of the country.

Educational books are of value as they do either one of two things: first, lead to action of a progressive sort which is characterized by the improvement of some educational activity; secondly, help to formulate educational thought along large, progressive lines. Technique books naturally can contribute to action more immediately than can books of principles or of "general surveys." To each type of book the educationist has been very largely committed in our generation. The compiler of these two books has adopted devices, however (which are probably new to educational book-making), which should contribute to much action on the part of the school and college administrators who read them. The devices include such schemes as: leaving places for memoranda by readers at intervals throughout the book; pro-

[1] *Self-Surveys by Teacher-Training Schools.* By W. H. Allen and C. G. Pearse. Yonkers: World Book Co., 1917. Pp. xvi+207. $2.25.

[2] *Self-Surveys by College and University.* By W. H. Allen. Yonkers: World Book Co., 1917. Pp. xv+494. $3.00.

viding for the answering of specific questions regarding his own conditions by the reader; the reporting of contrasted ways of doing the same thing with the direct question to the reader, "Do you do it thus or so?"

On fundamental questions of a constructive sort, concerning, for example, the course of study, this method is frankly limited, as all such "critical" survey methods are. Its excellence is confined to detailed suggestions for the criticism of existing conditions. The use of quantitative technique which has been shown to be the necessary tool of the makers of all the sciences is tabooed by the compiler of these books. He would make use of the comparative method only to the extent that he would quote examples of procedure in various institutions. All methods of numerical or statistical comparisons are declared to be useless.

It cannot be doubted that this book in the hands of normal schools and college administrators will provide an impetus for improvement of present methods of administering higher educational work in this country.

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5. *A technical study of high-school abilities.*[1]—The first number of a series of studies in education to be issued by the department of education of Johns Hopkins University has just appeared.[2] Part I deals with the coefficients of correlation existing between the school grades of 121 graduates of the Western High School, Baltimore. Part II is a study of the relation between the results obtained in several ability tests and the school grades of 30 pupils in the academic course and 29 in the commercial, who had entered the school in September, 1915.

Of necessity the writer has made extensive use of tables and the coefficient of correlation (Pearson). The records for each of the four years are treated separately, the main facts in each year being given in a summary table at the end of each section and a summary of all four years near the end of Part I.

Trabue's language scales L and M, Whipple's word-opposite test lists A and B, and Whipple's cancellation test were used as the basis for the discussion in Part II. On correlating the results of these tests with the school grades in the various subjects the author reached the following conclusion for the study as a whole:

1. This study of the coefficients of correlation among school grades shows a considerable amount of correlation, 71 per cent of all the coefficients being equal to or greater than 0.3, and 41 per cent being equal or greater than 0.5.

2. Drawing ranks lowest among all the subjects, the size of the coefficients being taken as a basis.

[1] Review contributed by Dr. R. M. Tryon, University of Chicago.

[2] *The Correlation of Abilities of High-School Pupils.* By D. E. Weglein. The Johns Hopkins University Studies in Education, No. 1. Baltimore: Johns Hopkins Press, 1917. $1.25.

3. The correlation, as found, may be due either to a "spread of ability" or to resemblance of elements among the several school subjects. Since drawing, a subject very unlike the others shows low coefficients, the correlation is probably due to resemblance of elements among the subjects, or at least of those things counting for success in school.

4. If it is desired to use a single subject as the basis of judgment of school progress, English is probably the best one to select for this purpose.

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6. *The Bureau of Education presents summarized statistics on city school administration.*—During the past two years a number of studies have appeared which summarize the status of *Current Practice in City School Administration.*[1] The most recent of these studies is a question-blank inquiry conducted by Mr. W. S. Deffenbaugh for the Bureau of Education. In agreement with the practice of the Bureau of Education, this study is merely a compilation of the replies to question blanks addressed to the superintendents of schools and to secretaries of school boards in the cities above 25,000 in population. It will be recalled that Mr. Deffenbaugh did this same type of work for the cities smaller than 25,000 about two years ago. The material is organized in accordance with the phases of school administration: the school board; officers of the board; the superintendent; associate, assistant, or deputy superintendents; principals; teachers; superintendent of buildings; superintendent of supplies or business agent. For each phase the report answers fundamental questions concerning size, for example, of boards, methods of selection, tenure of office, use of committees, method of electing officers, the functions and powers of the various school officials, methods of appointment, tenure of office, etc. For each phase discussed summary tables and graphs in the form of bar diagrams are used to make the numerical situation throughout the country stand out clearly. For example, it is shown very strikingly that the typical school board in cities of over 25,000 population in the United States is composed of nine or fewer than nine members. In spite of the agitation which has gone on for a number of years for the abolition of the use of standing committees, school boards are still conducting their business through committees. It is typical, for example, at the present time to have five standing committees. An interesting conclusion is found in connection with the question, Does the school board have the final tax-levying power? Of the 138 cities between 25,000 and 100,000 population, 70 cities are found in which the board is not required to submit an estimate to any other civil body. In 52 cities it is required to submit its budget either to the council or to a board of estimate. Thus we have evidence that there is an important tendency toward the taking of the financing of the public schools away from politically controlled bodies. The report devotes 23

[1] *Current Practice in City School Administration.* United States Bureau of Education, Bulletin No. 8, 1917. Pp. 98.

pages of the 98 to descriptive and graphic summaries of the situation. In the remaining pages are compiled the detailed replies to the specific questions of the blank.

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7. *Suggestive data on the money value of education.*—The school world has but recently recognized the important connection between the wealth and the wealth-producing power of any people and the quantity and quality of the education of that people. It seems clear that the lay public needs to be shown that from no other form of investment can such large dividends in material wealth be obtained as in investments in popular education, and that, as Commissioner Claxton says, "Comparative poverty is not to be pleaded as a reason for withholding the means of education, but rather as a means of supplying them in larger proportion." To put in the hands of the school man a descriptive and graphic record of *The Money Value of Education*, Professor Ellis' new monograph has been published and is being distributed by the Bureau of Education.[1] Professor Ellis shows by tabular and pictorial devices the close relationship between national wealth and power and national education; that schools are a paying investment for the state and that distinction and statesmanship in the United States are highly correlated with education. Many charts are reproduced in miniature form which have been designed to show the value of education to factory workers; for example, what industrial education paid 215 boys; minimum and maximum wages of girls with and without training; what four years in school paid, etc. In summing up the study Professor Ellis concludes that the superior earning power of graduates of schools is a demonstrated fact.

> The figures show conclusively that the schools are giving their pupils a greater earning power than even the strongest advocates of education had claimed. Inevitably, as the economic processes become more complex, the relative need for directive force in industry becomes greater and greater. Experience has shown that only through a thorough system of public schools and colleges can a state or nation provide for itself an adequate supply of citizens capable of supplying this necessary directive force.

This pamphlet should be of distinct value to school administrators both for the talking points presented and for the pictorial and graphic devices for presenting them to the public. In conclusion it also presents a good list of references on the money value of education.

III. BRIEF DESCRIPTIVE STATEMENTS

1. *Methods of School Inspection in England.* By H. G. WYATT, Inspector of Schools, Rawalpindi Division. Bureau of Education, India.

A careful and detailed report of the work of inspection in England by one engaged in similar work in India. Contains 8 chapters and 134 pages. Chapter i: History of

[1] A. C. Ellis, United States Bureau of Education, Bulletin No. 22, 1917. Pp. 52.

inspection in England. Chapter ii: Qualifications and training for school inspectors; usually specialists in some line; much experience required; must be head master in type of school inspected. Chapter iii: System of procedure in elementary schools fully explained; freedom allowed inspectors; investigators rather than promoters; criticizes transition from old system of testing pupils to the new of testing teachers. Chapter iv: Co-ordination of the various agencies engaged in inspecting; break between elementary and secondary; in elementary district inspector immediately responsible; much information given about number of inspectors, duties, etc.; specialists have proved most constructive—except that they disturb the proportion of school work; social side of inspectors' work emphasized; conflict between "local" and "medical" inspection. Chapter v: Devoted to reports and inquiries; considers (1) reports on individual schools, (2) reports on special subjects undertaken locally, (3) divisional reports, (4) publications of board of education; examples of reports given. Chapter vi: Devoted to secondary inspection; contains forms of printed notebooks, elaborate forms of inquiry supplied by board; much criticized. Chapter vii: Discusses promotion of certain movements: (1) the restoration of "grind" in the classroom, (2) promotion of manual and outdoor pursuits, (3) tendency to regard the individual rather than the class as the unit in education, (4) greater elasticity in school organization; system of promotion interesting. Chapter viii: Inspection and internal examination; change in purpose of inspection noted and criticized. Throughout the report comparisons are constantly made with work in India.

2. *Higher Technical Education in Foreign Countries.* By ANNA TOLMAN SMITH and W. S. JESIEN. United States Bureau of Education, Bulletin No. 11, 1917.

Written to meet the demand of school officers and business men of the United States with regard to standards and scope of higher technical education in foreign countries. Special attention given to schools which specialize in engineering and the mechanical arts. Considers technical schools requiring the same preliminary training as the universities of the respective countries. Bulletin gives (1) survey of studies preliminary to higher technical schools, (2) accounts of typical schools, (3) statistical summaries comprising additional institutions of same order. A close relation between the progress of industry and technical education emphasized in every survey. Schools of military and naval engineering pertain directly to state service. Numerous graphs showing total time and time devoted to practical work. Tables showing comparative equipment, number of students, practical output, etc. Lack of stimulating influence in research of universities is felt. Courses of study much enlarged. Many new subjects hitherto unheard of. Technical degrees more highly esteemed. In general, the influence of war is seen everywhere. Government control in many cases. Bulletin contains 120 pages.

IV. ADDITIONAL CURRENT EDUCATIONAL PUBLICATIONS RECEIVED IN NOVEMBER

(Detailed discussions of some of the following books will appear later.)

A. PUBLICATIONS OF UNITED STATES BUREAU OF EDUCATION

FOGHT, H. W. *Rural-Teacher Preparation in County Training Schools and High Schools.* Washington: Government Printing Office, 1917. Pp. 71.

ROBERTS, E. L. *Medical Inspection of Schools in Great Britain.* Washington: Government Printing Office, 1917. Pp. 69.

SMITH, ANNA TOLMAN. *Demand for Vocational Education in the Countries at War.* Washington: Government Printing Office, 1917. Pp. 16.

WEEKS, STEPHEN B. *History of Public-School Education in Delaware.* Washington: Government Printing Office, 1917. Pp. 181.

B. TEXTBOOKS FOR THE ELEMENTARY GRADES

FITZHUGH, PERCY KEESE. *The Boys' Book of Scouts.* Illustrated. New York: Thomas Y. Crowell Co., 1917. 8vo, pp. ix+317. $1.25.

LONG, AUGUSTUS WHITE. *American Patriotic Prose.* Boston: D. C. Heath & Co., 1917. Pp. xv+389.

MCSPADDEN, J. WALKER. *The Book of Holidays.* New York: Thomas Y. Crowell Co., 1917. Pp. 309.

RANKIN, JEAN SHERWOOD. *Mechanics of Written English.* Illustrated. Minneapolis, Minn.: Augsburg Publishing House, 1917. Pp. ix+167.

SOUTHWORTH, GERTRUDE V., and PAINE, PAUL MAYO. *Bugle Calls of Liberty.* Syracuse, N.Y.: Iroquois Publishing Co., 1917. Pp. x+179.

THOMSON, JEANNIE B. *The Art of Teaching Arithmetic.* New York: Longmans, Green, & Co., 1917. Pp. viii+295. $1.35.

C. TEXTBOOKS FOR THE HIGH SCHOOL

CLUTE, WILLARD NELSON. *Experimental General Science.* With 96 illustrations. Philadelphia: P. Blakiston's Son & Co., 1917. Pp. xv+303.

HOWE, SAMUEL BURNETT. *Essentials in Early European History.* New York: Longmans, Green, & Co., 1917. 4th ed. Pp. xii+436. $1.50.

JOHNSON, BURGES. *The Well of English, and the Bucket.* Boston: Little, Brown & Co., 1917. Pp. xi+149. $1.25.

MUSGROVE, EUGENE R. *Composition and Literature.* New York: Longmans, Green, & Co., 1917. Pp. viii+519. $1.20.

The Yale Shakespeare. The Tragedy of Hamlet, Prince of Denmark. Edited by JACK RANDALL CRAWFORD. New Haven: Yale University Press, 1917. Pp. 203. $0.50.

The Yale Shakespeare. The Chronicle History of the Life and Death of King Lear and his Three Daughters. Edited by WILLIAM LYON PHELPS. New Haven: Yale University Press, 1917. Pp. 154. $0.50.

FRENCH

OLMSTED, EVERETT WARD. *First Course in French.* New York: Henry Holt & Co., 1917. Pp. xi+332.

GERMAN

CRANDON, LAURA B. *Ein Anfangsbuch.* Illustrated. "New-World German Series." New York: World Book Co., 1917. Pp. xii+306.

KOENIG, ALFRED E., and MYERS, WALTER R. *Kleine deutsche Grammatik.* Minneapolis, Minn.: Perine Book Company. Pp. xxix+96.

SCHMIDT, L. M., and GLOKKE, E. *Das erste Jahr Deutsch.* Heath's "Modern Language Series." Boston: D. C. Heath & Co., 1917. Pp. xxix+282. $1.60.

STORM, THEODOR. *Immensee.* Edited by ALMA S. FICK. New York: Macmillan, 1917. Pp. xxiv+177.

SPANISH

DORADO, CAROLINA M. *España Pintoresca.* Boston: Ginn & Co., 1917. Pp. x+332.

HALL, GUILLERMO. *Poco a poco.* "New-World Spanish Series." New York: World Book Co., 1917. Pp. viii+308.

WARSAW, J. *Viajando por Sud America.* New York: Henry Holt & Co., 1917. Pp. vii+226.

D. MISCELLANEOUS PUBLICATIONS

ALDERMAN, EDWIN A. "The Function and Needs of Schools of Education in Universities and Colleges." New York: General Education Board, 1917. Occasional Papers No. 4. Paper. Pp. 31.

DAVIS, HENRY C. "Debating for High Schools." University of South Carolina, September, 1917, No. 60. Paper. Pp. 43.

"How the War Came to America." Issued by the Committee on Public Information, June 15, 1917. Paper. Pp. 31.

LUCCOCK, HALFORD E. *Studies in the Parables of Jesus.* New York: Abingdon Press, 1917. Pp. 131. $0.50.